DOCUMENT RESUME

ED 246 121 TM 840 402

AUTHOR Chamie, Mary
TITLE National, Institutional, and Household Factors Affecting Young Girls' School Attendance in Developing Societies.
INSTITUTION Agency for International Development (IDCA), Washington, DC.; International Center for Research on Women, Washington, D.C.
PUB DATE Nov 83
NOTE 95p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Attendance Patterns; Demography; *Developing Nations; Dropout Rate; Educational Policy; *Enrollment Influences; Enrollment Rate; Family Influence; Females; Foreign Countries; Grade Repetition; Institutional Characteristics; *Primary Education; *Sex Differences; *Womens Education

ABSTRACT

Why is it that fewer girls than boys enter and stay in school? What may be done to further increase the school enrollment of girls in developing countries? The answers to these questions constitute the central focus of this paper. It first documents sex differences in primary school participation and wastage rates in developing countries. Participation refers to school enrollment and attendance, and wastage to repeating a grade or dropping out of school. National socioeconomic and demographic characteristics and primary school enrollment levels by sex are then compared. Specific educational policies, institutional factors in the school system, and household factors that have been found by educational researchers to contribute to the lower participation and higher wastage rates for girls are then reviewed. Lastly, policy recommendations are made suggesting ways to increase girls' attendance in primary schools throughout the developing world. The emphasis in this paper is on data disaggregated by sex, on factors that can account for sex differentials, and on policies that will enhance girls' access to primary schools. Policy recommendations discussed in this paper will potentially enhance both girls' and boys' opportunities for primary education; the emphasis, however, is upon recommendations that specifically address the problems of girls. (BW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED246121

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

NATIONAL, INSTITUTIONAL, AND HOUSEHOLD FACTORS AFFECTING YOUNG GIRLS' SCHOOL ATTENDANCE IN DEVELOPING SOCIETIES

Mary Chamie
Consultant

The International Center for Research on Women
1717 Massachusetts Avenue, N.W.
Suite 501
Washington, D.C. 20036

and

The Office of Human Resources
U.S. Agency for International Development

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
K. White, ICRW
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

November 1983

TM 840 402

The author wishes to acknowledge the contribution of Dr. Nadia H. Youssef whose comments on earlier drafts were most insightful. Ms. Amy Mellencamp, Research Associate, was responsible for locating and gathering existing literature on this topic. Her assistance with the literature search is most appreciated. The author also appreciates the assistance in the literature review given by Dr. David Berelson.

TABLE OF CONTENTS

I.	Introduction		1
II.	Documenting the Problem		4
	A.	Statistical Indicators of School Participation and Wastage	4
		Enrollment Data	4
		Wastage Data	5
		Problems in Cross-Country Comparison	6
		Missing Data	7
		Research Findings	8
	B.	Presentation of Findings About Girls' School Participation and Wastage	8
		Sex Differences in School Enrollment	8
		Regional Differences in Girls' Enrollment and Attendance Figures	9
		Sex Differences in Repetition and Dropout Rates	10
III.	Factors Affecting Girls' School Participation		12
	A.	Socioeconomic and Demographic Conditions	
	B.	National Policies	16
		Universal Enrollment	16
		School Fees to Supplement Government Expenditures for Education	20
	C.	Schools: Institutional Factors	21
		The Location of Schools	21
		Coeducational and Sex-segregated School Systems	23
		Teacher Shortages	24
		Textbooks and Curriculum Relevance	26
		Competing Influences of School and Home	30
	D.	Household and Individual Background Factors	31
		Family Size and Composition: The Demand for Girls' Labor	31
		Age at Marriage	34

IV. Recommendations for Increasing Girls' School Attendance - 35

A. Recommendations for Further Refinements in Measurement 37

B. Recommendations to Maximize School Attendance of Primary School Girls 38

Macrostructural 38
National Policy Formation and Educational Planning at the Institutional Level 39
Improving Retention and Completion 41
Mobilizing Community Support 42
Communication and Education 43
Local Labor Force Development 44
Redesigning the Use of Existing School Facilities 44

C. Programs Directed at the Special Problems of Girls 45

Tables and Figures 48

Bibliography 70

LIST OF FIGURES AND TABLES

Table	Name	
1	Primary School Gross Enrollment Rates of Least Developed Countries by Sex of Pupil	48
2	Enrollment Rates and Representation Indices for Female Primary Enrollment in the Sudan (1977-78)	49
3	Percentage of 1970 First Year Pupils Reaching Each Consecutive Year of Primary Schooling by Sex of Child for the Regions of the World with Lowest Enrollment (Apparent Cohorts)	50
4	Sex Differences in Primary School Wastage in the African and Arab Regions Derived from the School History of Cohorts	51
5	Number of Primary Level Graduates who Graduated without Repeating, Who Ever Graduated, and the Number who Dropped out per 1,000 Entrants by Sex of Pupil for the African and Arab Regions	52
6	Mean Size of Rural Population by Region by Predominantly Rural or Urban Countries According to their Levels of Age-Specific Enrollment in School for Girls Aged 6-11	53
7	Male and Female Representation Levels in 16 East African Countries for Primary School Enrollment, in the Late 1970s	54
Figure		
1	Age-Specific Enrolment Ratios for Children Ages 6-11 by Regional Status and Sex for the Years 1960-80	55
2	Age-Specific Ratios for Children Ages 6-11 in Major Regions of the World by Sex of Child, 1960-1980	56
3	Percent of Girls 6-11 Years Old Who Attended School and the Drop-out Rate in Lesotho, Ivory Coast and Niger in 1970	57
4	Age-Specific Enrolment Ratios for Girls Aged 6-11 in Four Major Regions of the World, by Country, for the Years 1960-1980	58
5	Percent of Girls Enroled in Primary School Who Graduated Without Ever Repeating a Grade According to the Gross Enrolment Ratio of Females in Primary School for Selected African Countries, 1970	59

6	Percent of Girls Who Dropped out of Primary School According to the Gross Enrolment Ratio of Females in Primary School for Selected African Countries, 1970	60
7	Percent of Girls Who Dropped out of Primary School According to the Female Gross Enrolment Ratio in Primary Schools for the Arab Region, 1970	61
8	Percent of Girls Who Graduated from Primary School Without Ever Repeating a Grade According to the Female Gross Enrolment Ratio in Primary Schools in the Arab Region, 1970	62
9	Age-Specific Enrolment Ratios of Girls Aged 6-11 in Arab Countries According to the Percent of the Population that is Urban, 1980	63
10	Age-Specific Ratios of Girls Aged 6-11 in Asian Countries According to the Percent of the Population that is Urban, 1980	64
11	Age-Specific Enrolment Ratios of Girls Aged 6-11 in Latin American Countries According to the Percent of the Population that is Urban, 1980	65
12	Gross Enrolment Ratio for Girls in Primary School for Selected Countries in Africa According to the Percent of the Population in Each Country that is Urban, 1970	66
13	Age-Specific Ratios of Girls Aged 6-11 in Africa According to the Percent of the Population that is Urban, 1980	67
14	Percent of Children Ages 7-9 Who Are Attending School for Selected Countries in Latin America by Sex of Child and Rural/Urban Status	68
15	Percent of Children Who Are Attending School in Selected Countries among Arab and Asian States by Sex and Age of Child and Rural/Urban Status	69

I. INTRODUCTION

Socioeconomic development is a primary goal of all developing countries. One important reason for the emphasis upon achieving universal primary school enrollment throughout the world has been the realization by government that in order for the state to achieve its broad aims of socioeconomic development, all citizens should be socialized to appreciate the larger societal goals, to value the attainment of these goals, and to acquire literary and basic educational skills. One significant group of citizens that is increasingly singled out for improved primary school enrollment is young girls.

The underrepresentation of girls in the primary school system of most developing countries is one major contributor to poverty in the Third World (Mueller, 1983). Low national levels of female educational attainment are associated with higher rates of fertility and infant mortality (Cochrane, 1982) and lower levels of socioeconomic development (Giele and Smock, 1974). Lack of educational opportunities certainly reduces the social and economic options women have in developing countries and also reduces the potential socioeconomic returns of developing countries' investments in education (Selowsky, 1983).

The number of children enrolled in primary schools in the developing world has increased markedly in the last twenty years, but neither the goal of universal primary education for girls and boys nor the goal of equal access to primary education for both sexes has been realized (see Figure 1). With the exception of Latin America, the noteworthy increases in enrollment continue to be characterized by lower rates for girls than for boys (Figure 2). In many countries, even when enrolled, girls are less likely than boys to complete primary school.

Why is it that fewer girls than boys enter and stay in school? What may be done to further increase the school enrollment* of girls in developing countries? The answers to these questions constitute the central focus of this paper.

---

* The American spelling "enrollment" is utilized throughout this paper except when the European spelling "enrolment" is used in quotations and charts.

According to UNESCO, approximately 16 percent of the world's total expenditures on education (excluding China) are spent in developing countries, where 80 percent of all children aged 6 to 1 are located (UNESCO, 1980). Additional funding beyond that which children in developing countries already receive is not likely to be readily forthcoming. Given the difficult circumstances of limited educational funds and relatively limited educational opportunities for the majority of the world's children, what can be done to further increase the school enrollment of children, especially girls, in developing countries?

Much attention has been given in the literature to cultural factors, including religion, to account for the lower attendance rates for girls. Consider, for example, the argument used by Menon that Islam is the negative factor contributing to girls' school enrollment:

> Muslim women continue to be one of the most backward sections of the people in India as far as education is concerned. This seems to be largely due to the presence of certain social, structural, and institutional factors in Islam which contribute to depress women's education and keep them in an inferior position (Menon, 1981, page 1).

Extreme variations in enrollment rates for girls in predominantly Muslim countries, however, raise serious doubts that Islamic conservatism is the most important determinant of girls' primary school participation in these countries. If Menon had considered Libya or Bahrain, which are predominantly Muslim countries, he would have encountered high enrollment rates for girls aged 6 to 11 and may have come to a completely different conclusion about the effects of Islam as a cultural deterrent to girls' schooling.

While not entirely discounting the importance of cultural or religious explanations, this paper highlights educational policies and institutional and household factors that may better explain why fewer girls than boys attend primary schools. Girls' lower attendance rates, for instance, may largely be the result of:

- national educational policies concerning universal enrollment and school fees that affect boys and girls differently;

- the uneven distribution of primary schools, especially in rural areas, leading to greater losses of girls from the educational system since girls are not typically allowed to travel as far as are boys for schooling;

- a lack of schools for girls when education is sex-segregated;

- a shortage of female teachers and a general reluctance among certified female teachers to work in isolated rural areas or in urban slums areas where girls' school participation is exceptionally low;

- the perceived irrelevance of primary school curricula to women's employment possibilities and the general lack of opportunities in the labor market for educated women;

- the lack of emphasis in primary school curricula upon the value of basic educational skills acquired through primary school training to girls' future adult roles, e.g. numeracy, literacy, verbal expression, categorization, and conceptualization;

- the demand for girls' household labor and school hours that conflict with girls' household work, seasonal labor responsibilities in agricultural, and other types of production;

- late entry of girls into primary schools complicated by the increased likelihood of pregnancy and/or preparation for marriage and increased restrictions placed upon the physical mobility of older girls in some societies; and

- rigid and unreasonable examination and promotion requirements (considering the child's living and work environment) that lead to higher wastage rages or grade repetition. Large numbers of boy repeaters occupy class space that potentially could be utilized for new girl recruits into the system who are of the appropriate age for primary school attendance.

This paper first documents sex differences in primary school participation and wastage rates in developing countries. Participation refers to school enrollment and attendance, and wastage to repeating a grade or dropping out of school. The cross-national data presented in this section are preceded by a discussion of their methodological limitations. National socioeconomic and demographic characteristics and primary school enrollment levels by sex are then compared. Specific educational policies, institutional factors in the school system, and household factors that have been found by educational researchers to contribute to the lower participation and higher wastage rates for girls are then reviewed. Lastly, policy recommendations are made suggesting ways to increase girls' attendance in primary schools throughout the developing world.

The emphasis in this paper is on data disaggregated by sex, on factors that can account for sex differentials, and on policies that will enhance girls' access to primary schools. Policy recommendations discussed in this paper will potentially enhance both girls' and boys' opportunities for primary education; the emphasis, however, is upon recommendations that specifically address the special problems of girls.

II. DOCUMENTING THE PROBLEM

A. Statistical Indicators of School Participation and Wastage

Enrollment Data

No single data source is ideal for the analysis of school enrollment as unique problems are associated with the use of each. This report relies upon enrollment estimates which are primarily a composite of census data on school attendance, school enrollment data based upon aggregated annual school reports, and national survey data on the incidence of school attendance. Summary statistics using these data sources are published annually in the UNESCO Statistical Yearbook. A standard measure of educational enrollment taken from this and other data sources and utilized in this report is the enrollment rate (or ratio as it is sometimes called). Gross enrollment rates are the ratio of the total number of children enrolled in primary school to the total number of children in the population who are of eligible age for primary school.

Net enrollment rates are the ratio of the number of children who are of eligible age and who attend primary school, to the total number of children in the population who are of eligible age for primary school.

National data on school enrollment are essential for the preparation of indicators measuring access to primary education, yet they are not totally satisfactory because of the inadequacy of the indicators derived from census reports of school attendance. The information on school attendance is taken from special census projects and is not only limited to a few countries, but is only collected every ten years (United Nations, 1984b).

In addition, the annual estimates of enrollment from school systems and census reports are partly determined by the time of year when the data are collected. Estimates done by schools at the beginning of the year include a large number of students who will drop out of school after a very short period of time. UNESCO further discussed the problems with enrollment data and reviewed the degree of consistency in the reporting between census data estimates of school attendance and the information reported annually by educational institutions on school enrollment (UNESCO, 1983). UNESCO found that 36 countries of the 57 included in the analysis had data that were in relatively good agreement.

Wastage Data

Data used to examine sex differences in wastage rates are particularly sketchy. Developing countries often lack sufficient data for a thorough examination of sex differences in wastage in primary education. In addition, improvement in the methodology available for estimating wastage rates based upon incomplete data are sorely needed (UNESCO, 1980b). Measures used in this report to describe sex differences in wastage rates are usually based upon estimates of the percentage of children who have repeated a grade, or upon the percentage of children who have dropped out during primary school. An additional indicator of wastage reported in this paper is based upon an analysis of either synthetic or actual cohorts. A cohort analysis of wastage rates follows students consecutively or summarily through primary school. The ratio of the total number of months or years spent in school attendance by the entire cohort of children is then compared to the total number of children who graduate from primary school. The resultant estimate is an indicator of the average number of person/years

spent in school attendance by a cohort per primary school graduate.* Year per person in school attendance per primary school graduate can then be compared for and boys of primary school age.

Problems in Cross-Country Comparison

Problems with the quality of enrollment and wastage data include the usual difficulties associated with surveys of any kind, e.g. sampling errors, biased reporting, misreporting, misunderstanding, and refusal by selected respondents to participate in a survey. In addition, further difficulties arise when these data are used in cross-national comparisons. More specifically, cross-national comparisons are complicated by:

a. differences in the age ranges of students permitted in primary schools, and in the number of years required by countries to graduate from primary school;

b. problems with undercounting and underreporting by some educational institutions; and

c. substantial differences between the actual average enrollment during a year and the estimated annual enrollment rates taken at the beginning of the year, which are the result of high dropout rates and heavy absenteeism in some countries.

Cross-national comparisons of wastage data are also difficult because the policy of the country regarding automatic promotion complicates the interpretation of whether repetition, or repeating a grade, is necessarily a positive or negative aspect of schooling. However, one reasonably acceptable way to interpret repetition rates is through the presentation of pupil/year investments required to graduate a child from primary school. The pupil/year investments are a reasonable measure of the time and resources (e.g. pupil-teacher ratio, classroom space) required in order to graduate a child from primary school.

---

*For a detailed example of how cohort wastage rates are calculated, see Natto and Khan (1976).

It should also be noted that cross-country comparisons of wastage rates do not necessarily reveal the relative magnitude of the problem, because wastage estimates are derived from countries having very different levels of enrollment. Figure 3 illustrates this shortcoming with data from Lesotho, Ivory Coast, and Niger. Although these countries have relatively similar dropout rates for girls during primary school attendance (57, 54, and 59 percent, respectively), the actual proportion of the total female population between the ages of 6 and 11 who were enrolled in school in each of these countries is very different (95, 41, and 7 percent, respectively). The numerical and proportional sizes of the female student population loss are therefore very different. In each of the three countries, the estimated dropout rates for girls, although similar, require radically different priorities in policy formation and program development. In the Ivory Coast, where the majority of girls are not even enrolled in school, the dropout rate is less of an issue than is low enrollment. In contrast, in Lesotho, educational planners are more likely to be concerned with the development of programs and policies intended to reduce the high dropout rate since the large majority of girls are already enrolled in primary school. This illustrates the kind of problems in interpretation resulting from the simple presentation of any particular wastage measure without taking into consideration the magnitude of its importance with respect to the larger issue of national enrollment levels.

Missing Data

In addition to the problems associated with the inadequacies of existing data and their utilization for cross-country analyses, other problems include the absence of measures directly indicating sexual inequality in opportunities for education. There is a need for measures indicating:

a. the incidence of sex segregation in the educational process as measured by the existing number of single-sex schools and coeducational institutions, and the enrollment and attendance rates of girls in each; and

b. sex differences in educational specialization and sex biases in primary school curricula development (United Nations, 1984b). One problem associated with assessing sex biases in school activities is the lack of available data on sex differences in admission requirements, course distribution and attendance, program options, or educational testing scores.

program options, or educational testing scores.

Without the use of measures describing some of the institutional aspects of unequal access and participation, an analysis of enrollment and wastage differentials is restricted to examination of existing data and research on the subject, or speculation on the importance of the other measures.

Research Findings

Available research on the influence of institutional and household factors upon educational participation is generally uneven with respect to the data collected, the sample sizes, the quality of the analysis, and the outcome measure used. Differences in age ranges of populations studied; the level of sophistication of the data collection procedures, especially in countries having inadequate infrastructure for national data collection and compilation; the lack of distinction in many analyses between boys' and girls' participation and performance, all lead to problems when comparing or interpreting trends among countries. Even with such limitations, however, when these research findings are brought together into a composite picture, they offer an indication of the extent of the problem and stimulate suggestions for imaginative and realistic ways to improve girls' schooling.

B. Presentation Of Findings About Girls' Primary School Enrollment And Retention

Sex Differences in School Enrollment

Since 1960, school enrollment rates for children aged 6 to 11 in the developing regions have increased markedly. Just twenty years ago, they were about 20 to 30 percentage points below their current levels (Figure 2). From 1960 to 1980, however, enrollment rates for girls have lagged consistently behind the rates for boys in all developing regions except Latin America. As of 1980 in Asia, for example, girls aged 6 to 11 had not yet attained the levels of enrollment that boys in this age group attained in 1960 (Figure 2). Girls in the Arab and African region in 1980, in contrast, have surpassed the 1960 enrollment rates for boys in their respective regions. In the Arab region, the enrollment level of girls is currently about where the level for boys was in 1965. In Africa, the level for girls is approximately where the African boys' level was in 1975, and in Latin America, girls' and boys' enrollment rates have been virtually identical, at least since 1960.

Within each of the developing regions, with the exception of Latin America, there are important disparities in access to primary school between girls and boys. Examples of the sex differences in enrollment rates are shown in Table 1. In Afghanistan, 6 percent of the eligible females and 33 percent of the school-aged males attended primary schools. In Bangladesh, 46 percent of school-aged girls and 87 percent of boys attended primary schools. This pattern, although varying in its severity, is observed repeatedly throughout the Asian, African, and Arab regions.

Regional Differences In Girls' Enrollment

The enrollment rates of girls in the four developing regions of the world have improved substantially since 1960 (Figure 1). Latin America, for example, stands out in its higher enrollment of girls, and since the 1960s, has remained far above the Asian, African and Arab regions. In addition, the African and Arab regions have made considerable progress relative to Asia during the past 20 years. Whereas in 1960 the average enrollment of girls in the African and Arab regions was 20 percentage points below the rate for Asia, by 1980 the rates were virtually the same for the three regions.

Within each of the main regions, including Latin America, there are important country variations in girls' enrollment rates (Figure 4). The spread in the percentage points between the countries with the highest and lowest enrollment ratios in each of the regions remains quite similar, even after twenty years of reform. For example, whereas among African countries in 1960 enrollment rates for girls ranged from 2 percent in Somalia to a high of 100 percent in Reunion, in 1980 the range was from 13 percent in Niger to 100 percent in Reunion (see Figure 4). Furthermore, certain countries--for example, Upper Volta, Niger, Mali, Burundi, Ethiopia, Ghana, and Chad in Africa; Nepal, Afghanistan, Bhutan, Bangladesh, and Pakistan in Asia; Yemen, Sudan, Morocco, and Saudi Arabia in the Arab region; and Haiti and Guatemala in Latin America--continue to lag substantially behind other countries in their respective regions.

The inequality of opportunities among girls is evident not only among countries; intra-country inequities are also substantial. For example, the figures in Table 2 in the Appendix show the extensive variation found in the Sudan in the enrollment rates of girls by province, exemplifying the maldistribution of educational opportunities within some countries having overall low enrollment rates for girls.

Additionally, the data in this table show that in the Sudan, with the exception of four provinces, the representation index for boys is very high, indicating that even under the condition of low national enrollment rates, boys are either overrepresented or well represented in each of the provinces.* In contrast, with the exception of five provinces, girls are under-represented. The greatest inequality in representation throughout the provinces occurs where girls' overall provincial enrollment rates are lowest.

Sex Differences in Repetition and Dropout Rates

In Africa, little, if any, association appears to exist between the levels of primary school participation in general and wastage rates. The percentage of girls who graduate without ever repeating a grade is not associated with the female gross enrollment ratio in primary schools in Africa, though a comparison of the percentage that dropped out according to the female gross enrollments ratio indicates extreme variation in the dropout rates when female enrollments are very low (Figures 5 and 6). Variation in dropout rates is much less when enrollment rates for girls are very high. A UNESCO study of wastage in primary schools in African countries did not find a significant association between the percentage of children who are repeaters in primary school and the percentage of children enrolled in school (UNESCO, 1975b, p. 5, Figure 1). Maas and Criel (1982) also found in East Africa that "the relationship between enrollment equity and system efficiency, as measured by pyramid rates, is weak" (p. 15).

In contrast to Africa, the association between enrollment levels and wastage rates for Arab countries is mixed; excluding Saudi Arabia, the enrollment levels are negatively related to the dropout rates (Figure 7). The bivariate relationship between enrollment levels and the proportion never repeating a grade, however, is curvilinear (Figure 8). The percentage of girls who graduate from primary school without repetition is lowest when female gross-enrollment ratios for primary school are lowest and when they are highest. The explanations for this curvilinear distribution may be the varying quality of schooling and the background characteristics of students at the two extreme levels of enrollment.

---

*The representation index (RI) compares local male and female enrollment rates to expected male and female population rates based upon national or regional population and their enrollment levels. It indicates whether a given subgroup or area is under- or over-represented, and the degree to which educational opportunity is equally distributed (Maas and Criel, 1982. pp. 4-5)

A large proportion of both boys and girls drop out of school, usually between the first and second grades, especially in middle Africa, the Caribbean, tropical South America, and middle South Asia, typically amounting to 40 to 50 percent of all entrants into the school system (Table 3). There is little difference between the sexes with respect to attrition in the first grade, with the exception of middle Africa and middle Asia, where girls are worse off, and middle America, where girls are better off than boys. By the fifth year of schooling, girls' attrition is higher than boys' in each area except the Caribbean and temperate South America.

The high levels of wastage among girls are reflected in the generally higher pupil/year investments for girls than for boys. Data for Africa, for example, indicate that with the exception of Swaziland, Botswana, and Lesotho, it takes a greater number of pupil/years of cumulative school attendance to graduate a girl than a boy from primary school (Table 4), as girls are more likely to repeat a grade and drop out of school than boys. Estimates indicate that it may take as many as 23.8 pupil/years to graduate a girl from primary school in Africa, while the maximum for boys is considerably less--17.7 pupil/years.

In contrast, among the Arab states of North Africa, wastage rates were relatively low and sex differences were small, usually a half year more pupil/years for girls. The ranges of pupil/years needed to graduate girls and boys in primary school in the 1960s and 1970s were 7.1 to 9.8 pupil/years and 6.7 to 9.2 pupil/years respectively. (The lack of data for the other Arab countries precluded calculating rates for them.)

Through an analysis of synthetic cohorts, dropout and repetition rates were estimated for boys and girls in African states. In addition to the sex differences already mentioned, country differences in the attrition and repetition of girls varied enormously. For example, for every 100 girls attending primary school in Africa, 75 graduated from primary school in the Gambia, 53 in Swaziland, and 22 in both Malawi and the Central African Republic. Among the Arab states, for every 100 girls attending primary school, 83 graduated in Libya, 80 in Saudi Arabia, 72 in Bahrain, and 59 in Iraq (Table 5).

In Latin America, where enrollment rates are unfortunately estimated for all children rather than for each sex, dropout rates varied considerably. For example, for every 100 children enrolled in primary school, 77 completed six years of schooling in Costa Rica, 83 in Cuba, 40 in El Salvador, 29 in the Dominican Republic, 28 in Nicaragua,

30 in Brazil, 97 in Guyana and 63 in Peru (UNESCO, 1980, Annex I, Table 3). Romain (1982) observed that, in general, the Latin American region does not compare favorably with the other developing regions in terms of the percentage of entering students who reach the sixth year--54.4 percent versus 59.9 percent in East Africa and 60.9 percent in West Africa.

In summary, even though the dropout and repetition rates for boys are high, the rates for girls are generally higher. Although in some cases repetition is higher for boys, owing to their repeated attempts to pass the final examinations, the overall pattern is for a larger proportion of girls to be lost to the educational system during the primary years of schooling.

III. FACTORS AFFECTING GIRLS' SCHOOL PARTICIPATION

In this section, various policies and factors that influence girls' school participation are examined. They include:

1. socioeconomic and demographic conditions of countries;

2. national educational policies—universal enrollment, educational expenditures, and school fees;

3. institutional factors of the school system--location and distribution of schools, distance, coeducational and sex-segregated schools, teacher shortages, textbooks, and curriculum relevance; and

4. household and individual background factors--the demand for girls' labor, family size and composition, and female age at marriage.

These factors affect the school participation of both girls and boys; however, specific reference will be made, as the data permit, to those factors that are particularly important for girls' school participation.

A. Socioeconomic and Demographic Conditions

For the purposes of this report, national social, economic, and demographic factors are discussed first. Even though these factors are probably the least amenable to intervention, a review of their influence helps to portray the larger environment within which the more malleable institutional factors operate.

The social, economic, and demographic condition of a country has been found to be an important explanation for the levels of girls' and boys' school participation rates. Asbery (1983), for example, stressed the importance of the macro-level social and economic indicators, such as the gross national product, for the prediction of primary school dropouts. In a study of the socioeconomic determinants of primary school dropouts in developing countries (both sexes combined), Levy (1971) utilized 1957-1962 data from 42 less developed countries. Through the use of regression techniques, Levy identified several national-level factors which significantly explained the variance in the overall dropout rates for children in primary school. First, communication and the flow of information throughout the country substantially increased school continuation. Secondly, indirect evidence indicated that increases in the rates of absorption of the rural population into the primary school system increased dropout rates. Thirdly, high levels of social tension and political instability were associated with dropping out of school. Each of these findings suggests the substantial impact of national development levels on school participation rates.

Concomitant with development, urbanization has been shown to affect the school participation rates of girls and boys, although its influence varies by region. Among the countries for which data are available, higher levels of urbanization in themselves are not necessarily associated with higher enrollment rates for girls. A positive association between urbanization and higher levels of enrollment for girls is found in the Arab region (Figure 9); however, a lack of association is observed in Latin America, Asia, and Africa (Figures 10-13). One likely reason for the inconsistent findings is the varying degree of economic development and quality of life found in urban settings, which would strongly influence the type of association found between national levels of urbanization and school enrollment rates.

There is also not a great deal of documentation regarding the degree of disparity in the sex ratios according to the rural or urban status of children. From the evidence that does exist, however, the differences are sometimes remarkable. For instance, in the rural province of West Equatoria in the Sudan, the enrollment rate for females in primary school was 28 percent versus 60 percent for males. The rate for the more urban province of the Nile in the Sudan was 86 percent for females versus 100 percent for males (Maas and Criel, 1982, pp. 18-19). Although differences between rural and urban areas are remarkable, there is evidence that the discrepancies between boys' primary school enrollment rates in rural and urban areas are less than the disparities found between urban and rural girls' rates.

Notable differences between urban and rural areas with respect to the school attendance of girls have been found in such countries as Ecuador, Brazil, Dominican Republic, Peru, Guatemala (Figure 14), Liberia, Libya, and Pakistan (Figure 15). In addition, Smock (1981) noted that

> In Pakistan, women in Islamabad, the national capital, Lahore and Rawalpindi have significantly higher rates of school attendance than elsewhere in the country, with the percent of female enrollments in Islamabad reaching 48 percent at the primary level as compared to 16 percent in the North West Frontier and 4 percent in the northern areas (p. 51).

While urban/rural differentials in girls' access to education are common, significantly different enrollment rates for girls are also found within rural areas and even within urban areas. Maas and Criel (1982), for example, observed in East Africa that there was great variability in girls' primary school enrollment rates within both rural and urban districts.

Large rural population sizes are also linked to low enrollment rates for girls. Findings for Asia and Latin America are incomplete (see Table 6). Low enrollment countries in the Arab and African regions had approximately twice as many people residing in their rural areas as did high enrollment countries. In Africa, for example, the average rural population size was approximately 12 million for low enrollment countries versus 5 million for high enrollment countries (Table 6). Among rural Arab states, the differences in rural population sizes averaged 6 million versus 3 million for low and high enrollment countries, respectively.

Rapid population growth further complicates plans for universal primary school enrollment. Targets set in the early 1960s for 35 developing countries assumed an 18 percent increase in primary school-aged children by 1980. In actual fact, these countries experienced an increase now estimated at 93 percent (Fredrikson, 1982).

Not only were the rural population sizes greater for low enrollment countries, but the levels of national income for these countries also tended to be lower than the levels of the high enrollment countries. Using the quadrants that were formed to rank countries within regions, in Figures 9-13, we found that the majority of the countries listed as least developed by the World Bank were situated in Quadrant III, countries that are predominantly rural and have low enrollment rates for girls--that is, Bhutan, Bangladesh, Chad, Ethiopia, Nepal, Afghanistan, Pakistan (Figure 10), Rwanda, Burundi, Niger, and the Sudan (Figure 13) (all of which enrolled between 5 and 35 percent of the eligible girls aged 6 to 11 in 1980).

The critical role of socioeconomic development in improving girls' educational opportunities is clearly related to these findings. Yet comprehensive solutions to the problem of girls' participation such as "economic development" remain outside the grasp of many countries. As Smock noted:

> Most modernizing countries have severe problems in sustaining the financial costs of their present educational systems, and the inability of their economic systems to absorb the output of school leavers has further deepened the educational crisis. Poor economic prospects in a world economy suffering from the dual problems of inflation and recession, combined with soaring rates of population growth that require massive expenditures just to maintain the present coverage, militate against major educational initiatives (1981,p. 115).

These findings begin to reveal the nature of the problem facing policymakers and planners, i.e., how to substantially increase girls' primary school enrollment under the conditions of limited educational funds, especially in poor countries.

B. National Policies

Universal Enrollment. Many educational planners initially believed that the universal enrollment of children in primary school would eventually erase the significant disparity between girls' and boys' participation (UNESCO, 1980b, p. 29), but the goal of universal enrollment cannot be rapidly achieved. Developing nations have severe problems in sustaining the financial costs of their present systems. The additional costs of expanding the systems to include every school-aged child are prohibitive and unrealistic, particularly considering the current world economic situation and rates of population growth.

The implementation of universal enrollment policies is also a question of the political will to allocate resources to education and other basic services as opposed to industrial infrastructure, for instance. A University of Colombo study (1979, p. 260) described the kinds of problems that occur when there are weak linkages between stated national political goals and political commitment and investment in the problem. Although equal access to education has been accepted in Sri Lanka for many decades, universal enrollment has been only a goal of social policy and no national level provision exists for compulsory education. The 1939 Ordinance provided that the Executive Committee for Education could make regulations for enforcing compulsory attendance for the age group 5 to 14, but no such regulations were formulated in subsequent years.

Smock's (1981) analysis of the situation in the Philippines, Mexico, Ghana, Kenya, and Pakistan, indicates that national educational policies directed toward compulsory education, reduction in school fees, and increased national economic investments in primary education, as well as the overall priority of education in national planning schemes (all reflecting a high commitment to the problem by political leaders), are particularly positive determinants of primary school enrollment of girls. In an article on the politics of education, El Ghannam (1970) also argued that if there is little political support for meeting the needs of young girls, increased recruitment of girls into the system is likely to be sluggish.

The strong commitment of a nation's political leaders is essential to implement the financial and policy measures necessary in order to work towards the goal of universal primary school enrollment. Factors such as the public demand for education also influence the strength of a nation's will to expand educational opportunities. In Sri

Lanka, for instance, public demand has led to rapid increases in both girls' and boys' enrollment rates and near parity of educational opportunity for both sexes (University of Colombo, 1979, p. 259).

In countries where public demands for increased education are not leading to education reform, educational planning is even more difficult. El Ghannam (1970) noted that developing countries were struggling on at least two fronts: pursuing general economic development and institution building while simultaneously attempting to design realistic and effective policies for education reform. It is important to acknowledge the socioeconomic and institutional conditions under which educational policies must be formulated for the majority of countries having low school enrollment rates for girls and large disparities between boys' and girls' enrollment levels. Planning school programs under the constraints of underdevelopment and political instability calls for strong consideration to bureaucratic capacity to implement programs (Simmons 1975) and to resource limitations.

The design of the bureaucratic system also partly determines the level of girls' enrollment, Jain noted that

> The role of the Central Government (in India) might be limited in modifying the order or priorities for education in the States because up to 90 percent of the expenditure on education is met from the States' own resources and about 85 percent of the direct edpenditure on education reflects fixed cost on salaries (1981, p. 17).

When states rather than federal governments determine educational policy, national planning to increase girls' enrollment rates must take into consideration the legislative plans of each and every state in the action when attempting educational reforms. This could result in slowing down the speed with which educational reforms for girls can be undertaken. The lack of federal legislation to enact specific educational plans for girls lessens the possibility of sweeping reforms being instituted to provide for such important requirements as compulsory and universal education or girls' school construction in sex-segregated school systems.

In addition to problems which result from lack of federal control over educational planning for girls or boys, the shifting of governmental priorities from primary to higher education is one likely reason for the persistent disparity found in boys' and girls' school

enrollment rates, even in countries where enrollment rates are high.

The reallocation of money and resources from primary school development into secondary education subsequently may lower the priority of universal primary school enrollment at a time when girls are likely to benefit the most from further increases in enrollment. Such a shift in priorities inevitably hurts girls more than boys for several reasons: (a) typically more girls than boys remain outside of the primary school system at the point that priorities are shifted; and (b) in general, more boys than girls complete primary school and therefore qualify for secondary education.

Jain observed that within educational planning schemes, primary schooling is not always awarded the highest priority. In India, for example:

> .....the share of direct expenditure on higher education has increased from 22 percent in 1961/62 to 28 prcent in 1974/75 and it decreased on primary school education from 28 percent to 24 percent during the same period (1981, pp. 16-17).

Johnston and Clark (1982, p. 377) observed similar low priorities for primary education in Africa:

> Neglect of primary education and disproportionate investment in higher education, which in Sub-Saharan Africa yearly costs about one hundred times as much as a year of primary education, has received much attention.

In addition to the higher costs associated with greater investments in secondary and university education, Johnston and Clark also argued that the consequences of such investments are not always positive:

> It is obviously essential for a fraction of a country's population to obtain secondary and higher education in order to meet the needs for skilled and professional manpower; but returns to education often appear highest for investments in primary education, which is so much less expensive. Especially in Tropical Africa, however, rapid expansion of primary and secondary education has given rise to an acute and growing "school leaver problem" because of the failure of job opportunities to expand in pace with the output of the educational system (pp. 117-118).

Increased investment in higher secondary and university education with reduced attention paid either to vocational opportunities at the primary school level or to improvement in the quality or quantity of primary school graduates, will no doubt only further discourage primary school attendance of girls remaining outside the system.

National educational reform which works toward universal primary school enrollment must be concerned with both enrollment and retention rates of students. It was noted earlier that little evidence was found for a positive or negative association between girls' levels of enrollment and school repetition and dropout rates. In Africa and Latin America, there was no clear association; in the Arab region and Asia, there was evidence of a curvilinear or positive association between the two. The explanation for the low correlation between the two outcomes, or the mixed results, was suggested by Levy (1971):

> Countries with high enrollment ratios may have high returns to education and a strong demand for education and thus have low dropout rates, or they may draw in large numbers of less-motivated and less able children and thus have high dropout rates (p. 52).

Researchers have, however, tried to link the two outcomes. One author, for example, noted that

> Reforms that expand access to schooling often engender concomitantly higher rates of enrollment loss, both because many marginal pupils soon leave the educational system and because rapid expansion usually entails more crowded classrooms, greater recruitment of poorly trained teachers, very insufficient supplies and textbooks (Smock, 1981, p. 55).

Ultimately, the repercussions of rapid educational reform at the national level ought to settle down so that the supply system, facilities, and staff available for primary school students could catch up. During the settling process, however, girls may be affected more from lack of staff and facilities than are boys, especially in cultures where sex-segregation is emphasized. This is because boys' schools are more rapidly instituted than are girls' schools in some, but not all, developing countries which have sex-segregated school systems.

Levy's (1971) multivariate analysis of 42 developing countries showed that the dropout rate of countries was determined to a significant extent by the educational promotion policies. Countries requiring school systems to have rigid examination and promotion procedures were significantly associated with higher dropout rates. No distinctions in the analysis were made between dropout rates of girls and boys. Levy also found that the rate of growth of the enrollment ratio in primary schools was not a significant factor explaining the dropout rate. The enrollment ratio by itself, however, was a significant explanatory factor. Its significance was negative among first-year dropouts and positive for the remaining primary school years, cumulatively. The findings suggest that when enrollment rates are high, dropout rates are lower the first year and markedly higher thereafter. When enrollment rates are low, significant numbers drop out of primary school in the first year. This result was not in the expected direction and was difficult for Levy to interpret. The findings do, however, point to the importance of distinguishing in future analyses between the influences of educational reform on girls' wastage rates for high and low enrollment countries.

School Fees to Supplement Government Expenditures for Education. In many countries, educational expenditures are supplemented by school fees which families must pay for each child. The indirect educational costs (clothing, school books, supplies, and transportation) and the opportunity costs (resulting from the loss of children's labor and income from sending children to school) may represent additional major obstacles for families (Deble, 1980). Nkinyangi's (1982, pp. 215) research on low educational participation rates in the arid and semiarid districts in Kenya, for example, indicates that even in the low-cost schools, which because of distance and low population densities are primarily boarding schools, children must provide their own beds, bedding, and cutlery and pay a boarding fee of about US$20.00. Such costs can be serious barriers to the participation of children in school, particularly when poor families are not convinced of the value of girls' education.

Elimination of school fees, however, with a given amount of government money available for educational subsidies, may result in an overall deterioration in the quality of education and/or rationing of educational services. While the literature does not indicate that girls in particular are disadvantaged by the costs of schooling and educational reform, it can be assumed, given the abundance of evidence pointing in this direction, that if parents have to limit the number of children attending school due to financial reasons, boys are more likely to be sent to school than are girls.

The net impact of low school fees on girls' education, and especially the education of girls from poor families, is ambiguous. Smock (1981) notes that although high school fees relative to family income limit access to schooling, especially for the rural poor and probably for girls more than boys, eliminating these fees does not necessarily stimulate girls attendance. In Pakistan, where major reductions in primary school costs have taken place in the last ten years, the educational reforms may have benefitted boys more than girls and "at least initially have increased enrollment differentials" (p. 102). Nkinyangi's (1982, pp. 203-205) study in Kenya, however, showed that after the change in the national school fee policy, enrollments in the first grade between 1973 and 1974 increased 145 percent for boys and 161 percent for girls, indicating greater gains for girls than boys specifically in the first year of schooling. Many of these new students, however, soon withdrew from primary schools when other costs, such as building funds, activity fees, and equipment levies, were charged to their families. Further research is clearly required in order to sort out the short-term and long-term differential effects of national school policies upon girls' and boys' enrollment and retention rates.

C. Schools: Institutional Factors

The Location of Schools

In many developing countries, and particularly in rural areas, primary schools are divided into lower and upper levels. The latter are often in a different location and are unable to absorb all the graduates from lower primary schools. Data on wastage typically do not include estimates of the proportion of children who dropped out or repeated a grade because no further schooling was available to them in their local areas. In general, it is more socially acceptable for boys to travel distances, making the location of upper primary schools a greater problem for girls, especially in rural areas.

Chaibderraine's (1978) study of wastage in Algerian schools, which examined 940 dropouts, 2,260 repeaters, and 270 school attenders, showed in a multiple regression analysis of socioeconomic and school variables, that distance from school was a stronger predictor of quitting school for girls than for boys. In African countries, where girls are especially underrepresented in primary school, the available data suggest that when upper primary school systems are maldistributed, boys continue to stay in the system either through repetition or by travelling long distances to upper grades, whereas girls

typically drop out, if they are enrolled at all (see Table 7).

The determinants of school dropout and repetition rates appear to be strongly influenced by inaccessibility, either because promotion to the next higher grade cannot be achieved, the school system is incomplete, or the distance to a school having higher levels is excessive. Johnston (1976) reviewed the findings from the Second All-India Survey (1969-70) and the Royal Thai Ministry of Education Surveys (1971-74) in order to compare the merits of quality of school variables--such as quality of teachers in terms of training and educational qualifications, school and class size, and quality of facilities--with the merits of such school network variables as the ratio of upper to lower primary schools, and grade completeness (if all possible grades are offered) in the primary school system. Major findings were:

1. The phenomena of lower-primary school wastage and upper-primary wastage are very different, as are the variables which are most significant in explaining their differentials.

2. In India, there is a strong negative association between the degree of completeness in the lower-primary school system and the degree of wastage found in upper primary schools.

3. In Thailand, there is a significant and negative association between lower primary school wastage rates and opportunities for completion of upper primary schooling. The author hypothesizes that "parents, perceiving the non-availability of complete primary level schooling, are more prone to withdraw their children than are parents who live in regions or areas where complete primary schools exist" (p. 234).

4. The quality of schooling received in lower primary directly and positively influences attendance in upper primary schools.

5. In general, "...school network or distribution variables are better predictors of wastage (i.e., better explain the differences which occur) than are the quality of school variables. (Indeed in the Thai case, 81 percent of the differential in wastage between grades IV and V can be explained in terms of a school network variable based upon the ratio of lower-to-upper school place provision)" (p. 234).

These findings, which were based on a step-wise multiple regression technique and upon hierarchical analysis of the variables measuring the various factors, did not distinguish between girls and boys in the analysis of school factors associated with wastage rates. However, the study noted that in a number of Asian communities, the schools looked as though they were satisfactorily distributed across the districts until it was discovered that many of the schools were boys' schools. Johnston found that opportunities for girls to attend school were often very limited even when schools (that is, boys' schools) were well distributed throughout a region. This finding again points out the importance of distinguishing the type of school available in any particular location when analyzing school availability for girls. Johnston concluded that if goals of equity and efficiency are to be realized, planners must distinguish between the location, type, and distribution of school facilities when assessing equity of access and opportunity for school (1976, p. 235).

Coeducation and Sex-Segregated School Systems

Coeducation by itself is not shown to be an essential ingredient for increasing the school enrollment of girls (Smock, 1981; Natto and Khan, 1976). Nor is the effect of sex segregation shown to be a consistently negative influence upon children's school achievement, according to a review of the literature by Finn, Reiss, and Dulberg (1982). The negative effects of sex segregation are more attributable to the necessity of preparing separate facilities for each of the sexes, and to difficulties in recruiting female teachers for girls' schools (Shah, 1981; Natto and Khan, 1976; Lockheed and Jamison, 1979). Coeducation appears to be an issue which must be taken into consideration when examining the degree of equity in school availability for girls and/or boys (Johnston, 1976) and when considering teacher requirements (Shah, 1981; Natto and Khan, 1976; Lockheed and Jamison, 1979). The subsequent quality of schools or achievement levels of students, however, do not appear to be directly determined by the coeducational or sex-segregated nature of school systems. Perhaps the intent of

segregated schools is more of a factor than is sex segregation itself. If the purpose of segregation is to offer greater educational facilities and services to one sex over another, then the outcome may be quite negative. If the purpose is to allow both boys and girls to excel while maintaining traditional distinctions between them, the outcome may be positive, or at least not entirely negative.

Girls' schools can provide girls with important role models in the form of female teachers, less social pressure from not competing with boys, increased leadership opportunities, the chance to study non-traditional subjects, and encouragement to pursue academic excellence and professional careers (Smock, 1981, p. 107). In developing countries such as Mexico, the Philippines, Ghana, and Kenya, single-sex schools are frequently more prestigious and offer students better prospects for gaining entrance to higher levels of schooling. Coeducational schools in these countries tend to be of lower quality; in Ghana and Kenya, at least at the secondary level, coeducational schools charge higher fees and have poorer facilities, fewer qualified teachers, and fewer course offerings (Smock, 1981, p. 103).

Teacher Shortages

In much of the developing world, there is a severe shortage of qualified, well-trained teachers who are willing to work in rural and poor urban areas. Increased numbers of qualified teachers, particularly female teachers, may improve girls' school attendance and the quality of girls' schools, especially when school systems are segregated by sex.

The results of a teacher-training project in Tanzania suggest that an increase in the number of teachers available to the school system, regardless of their sex, will have a positive effect upon girls' access to school when schools are coeducational. Tanzania recruited large numbers of people who were primary school graduates, amounting to 13,510 trainees in 1976. The trainees taught half-time and studied half-time. Training continued through correspondence courses at their teaching sites, radio programs, and the training and supervision of the trainees by experienced teachers. The result was a significant increase in the number of available teachers and an especially notable increase in the enrollment of girls in primary school. The participation rate of girls was 74 percent that of boys in 1974, before the program was enacted, and 95 percent that of boys by 1979 (Dubbeldam, 1982, p. 15).

A special project in Nepal (UNESCO, 1975a; United Nations, 1978) showed that increased recruitment of female teachers improves rural girls' primary school attendance. One goal of the special project was to increase the recruitment of female teachers through the construction of a boarding school for female trainees and recruitment of rural women into the teacher-training program. Longitudinal research for the project showed that there was a significant overall increase in girls' participation at the primary schools where these female recruitees were teaching. The attitudes of parents toward girls' schooling did not alter during the time that the significant increases in girls' enrollment took place, although parents did feel that the availability of women teachers provided an impetus to send their daughters to local schools. The significance of increased teacher recruitment upon girls' school enrollment, therefore, appears to have been more important than parental attitudinal change toward educating girls--at least in the stated reasons for sending daughters to school.

Recruitment of women into the teaching profession remains a problem for many countries. In Saudi Arabia, which has a sex-segregated school program, the majority of female graduates of teacher-training institutes are not attracted by the education system. In the 1974/75 school year, Natto and Khan (1976) observed that only about 40 percent of women graduates of teacher-training institutes were employed in the school system. The remaining 60 percent of women graduates were unaccounted for. The authors recommended a careful investigation into the reason for the teacher loss so that this problem could be alleviated.

Rural conditions also complicate the recruitment of teachers, especially women. Female teachers are in short supply in rural areas, and as Shah (1982, pp. 360-61) noted in rural Pakistan, teachers' absenteeism is reported to be rampant. In many cases, women in particular remain on the payroll of rural schools without ever going there. Thus, there are many schools which remain without teachers and exist only in the official records. Such findings again point to the problems associated with the bureaucratic capacity to implement programs even when the simpler problems of teacher shortages are apparently resolved.

Textbooks and Curriculum Relevance

Textbooks and access to them are clearly important factors influencing school participation and performance of all children*. In many countries textbooks must be paid for by each student or a number of students must share a few texts. In a multivariate analysis of factors influencing reading achievement among first graders in Rio Grande do Sul, Brazil, Wolff (1970, p.19) found that in rural state schools, textbook availability was the most important factor in determining reading performance in the first grade. He recommended that to improve achievement at this level, the supply of textbooks to all first graders be instituted.

The fact that the shortage of textbooks particularly affects girls' school attendance has not been documented. It can be hypothesized, however, that families with limited resources to buy textbooks may provide for a boy first because he may be expected to achieve higher grades and remain in school longer.

The content of textbooks, especially their portrayal of sex roles in society, could theoretically influence girls' interest in formal education. However, there is no demonstrable evidence that textbooks containing sex stereotypes offset either girls' participation or scholastic achievement.

Textbooks used in the schools of Ghana and Kenya were noted by Smock to perpetuate "the colonial legacy of devaluating women and depreciating their roles and status" (Smock, 1981, p. 64). However, despite the textbooks' orientation, the enrollment level for girls in Kenya was 98 percent in 1980. In that country, the average number of pupil/years invested per primary graduate was quite similar for girls and boys, 8.7 and 8.3 respectively. In Ghana, on the other hand, differences in pupil/year invested for girls and boys were dramatic, 18.8 versus 14.4 years, respectively; and girls' enrollment was only 55 percent in 1980. These findings suggest that even though both nations utilized textbooks which devalued and depreciated the roles and status of women, the degree to which girls participated in the school systems of these two countries was very different.

---

* The studies reviewed in this section predict both participation rates and school performance. They are not strictly comparable because they often measure different outcome variables, but given the paucity of information on textbooks' influence upon school participation, studies considering performance are also discussed.

Although biased textboks no doubt constitute negative aspects of girls' schooling and socialization, they are not necessarily the most imposing barriers to school enrollment or to the efficient passage of girls through the primary school system. The explanation for the way such biases manifest themselves in educational behavior is not clearly understood, and much of the literature on the subject addresses developed nations (see Finn, Reiss, and Dulberg, 1980).

An experimental program in rural India noted that when special classes were prepared for children who were primary school dropouts, even the most indigenously planned textbook was initially irrelevant to the educational requirements of such children (Naik, 1982). The prospect, at least initially, of a textbook was simply too alien to be of any educational value. In many cases, the first book the child had ever seen was the textbook she or he acquired at school. These children were first introduced to school through indigenous songs and poetry in their local language and through simple educational tools adapted from local resources prior to being introduced to textboks. The result of such educational innovation was a significant decline in the dropout rate, especially for girls (Naik, 1982). It therefore appears that access to educational resources, indigenously adapted and made from local materials, in addition to textbook availability, are both likely influences upon girls' school participation.

A more important point concerning the content of textbooks and that of the curriculum in general is that academic training may not be appropriate to the economic adult roles that girls (and boys, for that matter) will realistically have to assume. The irrelevance of academic schooling to employment opportunities and lifestyles available to young women and men may be a key determinant of school wastage and attrition (Johnston and Clark, 1982). Village studies in Pakistan, for example, suggest that the academic training received by educated rural women did not give them any economic advantage over their illiterate counterparts, with the exception of the few who found employment as school teachers (Anwar and Bilquees, 1976). Werdeling (1982) observed that a "modern" school has comparatively little to offer a person living in an area with a subsistence economy or working as an unskilled laborer. Werdeling's argument might be countered to a certain extent, however, by the considerable evidence linking reduced infant mortality and declining fertility to female educational attainment.

A study of school dropouts in selected rural parts of India indicated that students who dropped out of school before secondary matriculation had higher rates of employment and more realistic wage expectations than did the young women and men who had graduated from school (The Indian Institute of Public Opinion, 1973). Among females, 85 percent of school dropouts and 91 percent of the matriculates were unemployed when interviewed; among males, 45 percent of school dropouts and 68 percent of male matriculates were unemployed. These results suggest that there are insufficient numbers of jobs to "square with the higher aspirations of matriculates, proving once again that the educational system has little relevance to the environment in which the educated have to make a living" (The Indian Institute of Public Opinion, 1973, p. 34). Linking curriculum development in schools to employment opportunities is viewed by many analysts as an important way to increase the relevance of schools to girls (The Indian Institute of Public Opinion, 1973; UNESCO, 1975a; Naik, 1982).

One major reason for the lesser emphasis upon girls' school attendance is that in many societies, formal education is not seen as relevant to, or an enhancement of, the future responsibilities of girls. In the informal sector of the work force, many women participate as unpaid family assistants or are paid in kind rather than cash, especially in rural areas. The informal or largely indigenously trained work force within which many women compete does not require educational certification (Youssef, 1982). In addition to the demands for informally trained women in such occupations as trading and marketing in parts of Africa (Akuffo, 1975), and the demands for agricultural and domestic production, there is also a demand for female labor in the informal medical and health sector. Indigenous midwives and female healers are occupational categories of the indigenous medical and health professions, for example, that thrive in many developing countries. Yet these medical specialists' preparation for their occupations is largely through personal experience, fieldwork, observation, and training by older women who are themselves midwives and healers (Chamie and Harfouche, 1976; El-Hamamsey, 1975; Rogers, 1975). Indigenous occupations such as midwifery, in addition to women's occupations in marketing, animal and domestic production, and agriculture are primarily learned outside the sphere of the formal school setting.

Studies of primary school wastage in Egypt and Algeria indicate that wastage rates were significantly lower when teachers were selected from the local school district, thereby increasing the likelihood that teachers would be knowledgeable of local problems, occupations, and community needs (Werdelink, 1982). This finding is also

did in school (Nag et al. 1978). A study of rural dropouts in Ghana found that eight out of ten female dropouts from primary school were occupied in learning trades, either by helping their mothers or guardians, or on their own. Their trading activities undoubtedly conflicted with their school attendance (Akuffo, 1975).

Boys are also involved in productive activities, but the family expectations for them place greater emphasis upon economic productivity at a later age. Parents stress education and school attendance for boys because they expect economic support from them in their old age, rather than immediately. For this reason in particular, parents and teachers do not necessarily view girls' schoolwork to be as important as they do that of boys (Safilios-Rothschild, 1982; Jones, 1982).

The seasonal nature of home production of foods and agricultural demands for family labor also interrupt school attendance for girls and boys. The demand for labor seems to be strongly sex- related. In Botswana, for example, school attendance of girls is at its peak in November, when little agricultural activity takes place. At harvest time in May (harvesting is a prime agricultural activity of women), school attendance drops more for girls than for boys (Chernichovsky, 1981).

The competing demands upon girls' time for domestic responsibilities, for the care of younger siblings, for labor, for marriage and reproduction, all work to discourage primary school attendance. Plans devised to improve the educational attainment of girls who have these competing demands upon their time must directly address the issues of child labor, lack of child care for younger siblings, and the opportunity costs to poor families desiring to send their daughters to school.

Family size is important to girls' access to schooling; there is evidence that large family size may at times be positively associated with female educational attainment. A study in Botswana found that large family size increases some children's likelihood of school attendance (Chernichovsky, 1981). Selected children of large families are more likely to be enrolled in school because other children in the family can stay home and help with the agricultural and animal production. The presence of elderly members in the household was also associated with increased children's enrollment, as the elderly were available to cover the children's chores during children's absence for school. More educated parents, however, rather than discriminating among their children and only selecting a few to send to school, attempted to send more of their children to school but

allowed each child less time there (p. 17). This would lower each child's educational attainment while increasing each child's probability of ever having attended school.

In contrast, a study in Taiwan (Hermalin, Seltzer and Lin, 1982) found that family size was negatively and significantly associated with the number of years of women's schooling, among young women and among women in the more advantaged strata of society. Large family size was not, however, significantly associated with female educational attainment among the population at large. The reason that family size was negatively associated with educational attainment among younger Taiwanese women and among women having higher socioeconomic status was that their families had higher educational aspirations for children, regardless of the sex of the child. Among older, more traditional women and among the poor, the low level of educational attainment of girls was more attributable to a general lack of opportunity for schooling among the entire subpopulation of girls, regardless of family size.

These findings suggest that as societies move from a more traditional socioeconomic structure to a more modern one, girls' schooling is given greater value and seen as a means for social mobility. Parents often begin to invest in educating the children they have rather than in having more children. Family size under such conditions will therefore indicate the amount of resources available per child for education and may negatively influence educational attainment (Hermalin, Seltzer, and Lin, 1982, pp. 269-270).

Age at Marriage

The role of women's age at marriage in explaining girls' attendance rates is not clear. On the one hand, some studies indicate that women who marry at an early age are less likely to complete primary school (i.e., Safilios-Rothschild, 1979). Youssef (1979), however, observed that there were extreme differences in enrollment ratios of girls in countries having early marriage and much less variation among countries having higher ages at marriage, suggesting that early marriage ages are not necessarily associated with low rates of enrollment for girls. Bowman and Anderson (1980) also noted that "the two categories of activities—married or in school—adds up in most cases to considerably less than 100 percent of the female population in that age group. (In certain countries) the two activities together add up to less than 50 percent" (p. 21).

measured by the mean number of years of schooling acquired by primary and secondary teachers, and by the average recurrent expenditures on schooling per child aged 7 to 13). Despite large differences found in family incomes beween rural and urban areas and the assumed differences in opportunity costs for the two areas, Birdsall noted that in urban areas, increased gains in enrollment and performance would help children from lower socioeconomic groups the most. This is because the demand for primary schooling among the middle class is largely saturated in urban areas. In rural areas, further increases in school availability and quality would have "tended to help more of those children from relatively better-off households within rural areas" (p. 5), because even the demand of middle-income families for schooling had not yet been saturated. Given that middle-income families are still demanding schools in rural areas, it appears that the demand for schools for poor rural girls will be met last.

D. Household and Individual Background Factors

The previous section on institutional factors described studies indicating that family factors are sometimes less important in explaining school participation than are school variables in developing countries. There are several critical factors, however, associated with the family that significantly account for girls' lower school attendance rates in the Third World, even when schools effectively recruit them. Three such factors are highlighted below: family size and composition, demand for girls' labor, and age at marriage.

Family Size and Composition: The Demand for Girls' Labor

Policies for improving children's enrollment and attendance must take into consideration the available options households have for agricultural and home production, especially in rural areas, as well as alternative income and sources of labor available to such households when children attend school. This is perhaps most apparent when considering the few available studies relating education to female-headed households. In her research on Brazil, Schmink (1980) noted that

> Households headed by females in low-income groups were more likely to have no children registered in school, and much more likely to cite financial problems as the reason for their absence than were male-headed households....the need for multiple-earners in female-headed households appears to affect the extent to which future generations of workers are able to take advantage of educational services in urban areas and female children may be particularly affected by these constraints (p. 21).

Chaidberraine's (1978) multivariate analysis of primary school wastage in Algeria also indicated that children whose fathers had emigrated for work more often failed in primary school, again suggesting that when fathers are absent from the home, mothers depend more heavily upon their children for support.

Very little information and no empirical evidence was found for the effects of family migration patterns upon girls' access to primary school. Werdelin (1982) discussed the problems of Bedouin societies and families who seasonally migrate for work in developing countries, and the resultant lack of continuity in school attendance for children, but no empirical evidence was provided.

The decision to go to school or to drop out, for most children between the ages of six and eleven, is made by their parents (The Indian Institute of Public Opinion, 1973; Deble, 1980). Children in Tanganyika (now Tanzania) leave school for reasons generally attributable to lower socioeconomic conditions, such as the need for child labor, poor health, nutrition, and the high financial costs of schooling (Collins, 1965). Among lower socioeconomic families, the gathering of fuel, food preparation, and either voluntary or involuntary participation in the family's economic survival is apt to be the primary purpose of many children's daily activities. The opportunity costs of schooling are thus greater for poor families, both in terms of monetary gains from child labor, and in terms of time lost on school activities which could be invested in work in the field, in family business, or in the home (Safilios-Rothschild, 1979). Under such circumstances, schooling, especially for girls, is more likely to be viewed as either too expensive or largely irrelevant to the existing requirements for daily survival.

One of the most significant factors discouraging girls' school attendance at the primary level is that girls in general have greater and earlier responsibilities than boys in productive labor in the home and outside the home (Lynch, 1975; Balderson, 1981; McSweeney and Freedman, 1982; Jones, 1982; Safilios-Rothschild, 1979; Schildkrout, 1982). Girls spend significantly more hours doing productive household labor than boys. Time-budget studies conducted in rural areas of Yemen, Bangladesh, Botswana, Nepal, and Java repeatedly found that young girls spend more time in household and child care tasks than do boys (Safilios-Rothschild, 1979). In rural Nepal, for example, girls between the ages of six and eight spent over eight times more hours doing child care tasks than did six-to-eight-year-old boys. They also spent one-fifth the number of hours that boys

supported by the results of a project by UNESCO (1975) in which young women recruited locally were taught home economics and family and health education during their training to become primary school teachers, in order to increase the relevance of their training to community problems. Both the increased numbers of women teachers graduated by the experimental teacher-training school, and the special training programs for women teachers stressing home economics and health education were linked to increased enrollment of girls in the primary schools where these women teachers taught, primarily because the parents of young girls viewed the women teachers as having valuable skills and relevant training for the education of their daughters. Yet special classes for girl students on domestic and health issues are often assailed as an inhibitor to girl students' full participation into the broader curriculum, particularly in such subjects as math and sciences (Saunders, 1975; Finn, Reiss, and Dulberg, 1982). These restrictions, or sex-streaming of school programs, are believed to ultimately limit the opportunities for technical training in areas in which young men are more likely to receive training, e.g. mechanical and electrical equipment. Attempts to comply effectively with all the controversial requirements for improving the quality of schooling for girls ultimately leads to controversy over whether schools should meet the existing educational needs required of women in more traditional roles or whether the schools' responsibility is to foster new economic and occupational roles for women. Undoubtedly schools must do both, and it will take considerable innovation and imagination to effectively integrate both goals so that the value of education is perceived as important for all women, regardless of their future economic and occupational responsibilities.

Increases in the quality or quantity of inputs into the school systems, such as teacher training or teacher's salaries, for example, were not correlated with the dropout rates of children in primary school among the 42 countries examined by Levy (1971). Teacher training and expenditures per student were also not apparently correlated with student achievement, according to Simmon's and Alexander's (1978) review of the literature for ten different developing countries. They found that the removal of a child from the home environment to a school environment for extended periods of time had the most significant impact upon student academic performance in general, and that home background had a stronger effect on achievement than did schooling variables at the primary school level (Simmons and Alexander, 1978, p. 355).

It is important to note that Simmon's and Alexander's review of research on children's school performance concentrated upon countries located in Quadrants I and II in Figures 9-13, that is, countries having higher levels of girls' school enrollment and higher levels of economic development. The findings for more developed, higher enrollment countries may not be applicable to poor rural nations having low enrollments.

Competing Influences of School and Home

School characteristics are likely to be especially important in improving children's school performance in less developed countries (Simmons and Alexander, 1978; Smock, 1981). In a country study of student achievement in Uganda, a rural country having low enrollment rates, particularly for girls, Heyneman and Jamison (1980) found that school inputs, such as school facilities, the quality of the teacher's English and, to a lesser extent, the number of available textbooks, were positively associated with student achievement in the seventh year examination. Family background variables, in contrast, were weakly and even negatively correlated with achievement. A multivariate analysis of factors influencing reading achievement among first graders in Rio Grande Do Sul, Brazil, also found that school variables, such as the number of teachers in the class and teachers' experience with first graders, were particularly important (Wolff, 1970). The analysis in both studies, however, did not compare institutional variables' possible differential effects upon girls' and boys' school performance.

School-related institutional factors sorely need to be objectively measured and evaluated for their differential influence upon girls' and boys' school performance in developing countries. Some clues as to the direction that such an analysis might take are available from existing research on children's school performance that does not take sex differences into consideration.

There is some evidence suggesting that the competing forces of home and school differentially influence girls' school participation depending upon the general national level of economic development. Increased investment by nations in the goal of universal enrollment in primary school leads first to satisfying the demand for schooling of boys and of higher socioeconomic families; the educational problems of the poor and particularly those of girls in poor rural families are typically addressed last. The educational attainment of children in Brazil, a predominantly urban country having high enrollment rates for girls in primary school, for example, was shown by Birdsall (1982) to be strongly and positively influenced by school availability and school quality (as

measured by the mean number of years of schooling acquired by primary and secondary teachers, and by the average recurrent expenditures on schooling per child aged 7 to 13). Despite large differences found in family incomes beween rural and urban areas and the assumed differences in opportunity costs for the two areas, Birdsall noted that in urban areas, increased gains in enrollment and performance would help children from lower socioeconomic groups the most. This is because the demand for primary schooling among the middle class is largely saturated in urban areas. In rural areas, further increases in school availability and quality would have "tended to help more of those children from relatively better-off households within rural areas" (p. 5), because even the demand of middle-income families for schooling had not yet been saturated. Given that middle-income families are still demanding schools in rural areas, it appears that the demand for schools for poor rural girls will be met last.

D. Household and Individual Background Factors

The previous section on institutional factors described studies indicating that family factors are sometimes less important in explaining school participation than are school variables in developing countries. There are several critical factors, however, associated with the family that significantly account for girls' lower school attendance rates in the Third World, even when schools effectively recruit them. Three such factors are highlighted below: family size and composition, demand for girls' labor, and age at marriage.

Family Size and Composition: The Demand for Girls' Labor

Policies for improving children's enrollment and attendance must take into consideration the available options households have for agricultural and home production, especially in rural areas, as well as alternative income and sources of labor available to such households when children attend school. This is perhaps most apparent when considering the few available studies relating education to female-headed households. In her research on Brazil, Schmink (1980) noted that

> Households headed by females in low-income groups were more likely to have no children registered in school, and much more likely to cite financial problems as the reason for their absence than were male-headed households....the need for multiple-earners in female-headed households appears to affect the extent to which future generations of workers are able to take advantage of educational services in urban areas and female children may be particularly affected by these constraints (p. 21).

Chaidberraine's (1978) multivariate analysis of primary school wastage in Algeria also indicated that children whose fathers had emigrated for work more often failed in primary school, again suggesting that when fathers are absent from the nome, mothers depend more heavily upon their children for support.

Very little information and no empirical evidence was found for the effects of family migration patterns upon girls' access to primary school. Werdelin (1982) discussed the problems of Bedouin societies and families who seasonally migrate for work in developing countries, and the resultant lack of continuity in school attendance for children, but no empirical evidence was provided.

The decision to go to school or to drop out, for most children between the ages of six and eleven, is made by their parents (The Indian Institute of Public Opinion, 1973; Deble, 1980). Children in Tanganyika (now Tanzania) leave school for reasons generally attributable to lower socioeconomic conditions, such as the need for child labor, poor health, nutrition, and the high financial costs of schooling (Collins, 1965). Among lower socioeconomic families, the gathering of fuel, food preparation, and either voluntary or involuntary participation in the family's economic survival is apt to be the primary purpose of many children's daily activities. The opportunity costs of schooling are thus greater for poor families, both in terms of monetary gains from child labor, and in terms of time lost on school activities which could be invested in work in the field, in family business, or in the home (Safilios-Rothschild, 1979). Under such circumstances, schooling, especially for girls, is more likely to be viewed as either too expensive or largely irrelevant to the existing requirements for daily survival.

One of the most significant factors discouraging girls' school attendance at the primary level is that girls in general have greater and earlier responsibilities than boys in productive labor in the home and outside the home (Lynch, 1975; Balderson, 1981; McSweeney and Freedman, 1982; Jones, 1982; Safilios-Rothschild, 1979; Schildkrout, 1982). Girls spend significantly more hours doing productive household labor than boys. Time-budget studies conducted in rural areas of Yemen, Bangladesh, Botswana, Nepal, and Java repeatedly found that young girls spend more time in household and child care tasks than do boys (Safilios-Rothschild, 1979). In rural Nepal, for example, girls between the ages of six and eight spent over eight times more hours doing child care tasks than did six-to-eight-year-old boys. They also spent one-fifth the number of hours that boys

did in school (Nag et al. 1978). A study of rural dropouts in Ghana found that eight out of ten female dropouts from primary school were occupied in learning trades, either by helping their mothers or guardians, or on their own. Their trading activities undoubtedly conflicted with their school attendance (Akuffo, 1975).

Boys are also involved in productive activities, but the family expectations for them place greater emphasis upon economic productivity at a later age. Parents stress education and school attendance for boys because they expect economic support from them in their old age, rather than immediately. For this reason in particular, parents and teachers do not necessarily view girls' schoolwork to be as important as they do that of boys (Safilios-Rothschild, 1982; Jones, 1982).

The seasonal nature of home production of foods and agricultural demands for family labor also interrupt school attendance for girls and boys. The demand for labor seems to be strongly sex- related. In Botswana, for example, school attendance of girls is at its peak in November, when little agricultural activity takes place. At harvest time in May (harvesting is a prime agricultural activity of women), school attendance drops more for girls than for boys (Chernichovsky, 1981).

The competing demands upon girls' time for domestic responsibilities, for the care of younger siblings, for labor, for marriage and reproduction, all work to discourage primary school attendance. Plans devised to improve the educational attainment of girls who have these competing demands upon their time must directly address the issues of child labor, lack of child care for younger siblings, and the opportunity costs to poor families desiring to send their daughters to school.

Family size is important to girls' access to schooling; there is evidence that large family size may at times be positively associated with female educational attainment. A study in Botswana found that large family size increases some children's likelihood of school attendance (Chernichovsky, 1981). Selected children of large families are more likely to be enrolled in school because other children in the family can stay home and help with the agricultural and animal production. The presence of elderly members in the household was also associated with increased children's enrollment, as the elderly were available to cover the children's chores during children's absence for school. More educated parents, however, rather than discriminating among their children and only selecting a few to send to school, attempted to send more of their children to school but

allowed each child less time there (p. 17). This would lower each child's educational attainment while increasing each child's probability of ever having attended school.

In contrast, a study in Taiwan (Hermalin, Seltzer and Lin, 1982) found that family size was negatively and significantly associated with the number of years of women's schooling, among young women and among women in the more advantaged strata of society. Large family size was not, however, significantly associated with female educational attainment among the population at large. The reason that family size was negatively associated with educational attainment among younger Taiwanese women and among women having higher socioeconomic status was that their families had higher educational aspirations for children, regardless of the sex of the child. Among older, more traditional women and among the poor, the low level of educational attainment of girls was more attributable to a general lack of opportunity for schooling among the entire subpopulation of girls, regardless of family size.

These findings suggest that as societies move from a more traditional socioeconomic structure to a more modern one, girls' schooling is given greater value and seen as a means for social mobility. Parents often begin to invest in educating the children they have rather than in having more children. Family size under such conditions will therefore indicate the amount of resources available per child for education and may negatively influence educational attainment (Hermalin, Seltzer, and Lin, 1982, pp. 269-270).

Age at Marriage

The role of women's age at marriage in explaining girls' attendance rates is not clear. On the one hand, some studies indicate that women who marry at an early age are less likely to complete primary school (i.e., Safilios-Rothschild, 1979). Youssef (1979), however, observed that there were extreme differences in enrollment ratios of girls in countries having early marriage and much less variation among countries having higher ages at marriage, suggesting that early marriage ages are not necessarily associated with low rates of enrollment for girls. Bowman and Anderson (1980) also noted that "the two categories of activities—married or in school—adds up in most cases to considerably less than 100 percent of the female population in that age group. (In certain countries) the two activities together add up to less than 50 percent" (p. 21).

One possible explanation for the contradictory evidence about the role age at marriage plays in determining girls' school attendance stems from the fact that the pressures to leave school for marriage are more likely to occur when primary schools serve older-aged girls. The fact that the primary school systems have single entry points (i.e., first-year classes for all ages, mixing younger and older children having divergent educational needs), strongly discourages girls' continued attendance. Late entry and high repetition rates among girls, especially because of repeated absenteeism, have at times pushed the average age of primary school attendance among girls into the post-pubertal years. In fact, a certain proportion of young women attending primary school are forced to drop out because of pregnancy or plans for marriage (Safilios-Rothschild, 1979; Youssef, 1976). A small in-depth examination of rural schoolgirls in Ghana found that the age of girls in primary school ranged from 6 to 20 years of age, with two out of ten girls being 18 years old or more. An additional three out of ten schoolgirls were between the ages of 16 and 17 (Akuffo, 1975). Approximately four out of ten of the female dropouts in rural Ghana left school because of pregnancy.

Household and individual background factors may be especially important to consider when explaining rural and/or poor girls' lower school attendance rates. Girls may be more disadvantaged by the earlier need in a household for girls' labor; the size and composition of a family which may preclude sending a daughter to school when resources are limited; and the age at marriage which may mean dropping out before completing primary school, especially when girls are already late starters to primary school. Such factors, when added to the differential effects of national educational policies and institutional factors of the school system, may explain why fewer girls than boys complete primary education.

IV. RECOMMENDATIONS FOR INCREASING GIRLS' AND BOYS' SCHOOL ATTENDANCE

The trends in girls' access to primary schooling exhibit reasonably consistent patterns across developing countries. In general, when educational reforms lead to rapid improvement in primary school enrollment, boys are more readily recruited into the formal educational system; girls lag behind boys in their enrollment rates and drop out of school at faster rates than boys. The gap in enrollment rates slowly begins to close as the relatively larger demand for boys' education is satisfied.

In some cases, however, the enrollment gap between the sexes remains even when the national enrollment level for boys has reached its maximum.* What are the reasons for these patterns? This paper suggests that, when compared to boys' participation, the significantly lower levels of girls' participation in primary school, particularly in poor rural and poor urban areas, is largely a function of three sets of factors:

1. The inaccessibility of schooling to the poor--due to the costs of schooling and the uneven regional and local distribution of primary schools, especially upper primary schools--that seems to affect girls more than it affects boys.

2. The lack of schools for girls when public primary school systems are segregated by sex, and the shortage of female teachers for existing schools.

3. The sexual division of labor within poor households that assigns tasks to girls (both in the productive and reproductive spheres) that are more time-intensive than those assigned to boys, and therefore leaves girls with fewer free or "leisure" hours that can be used to attend school.

What can be done to increase girls' participation in primary schooling in the Third World?

The recommendations presented in this report deal with the following areas:

1. Ways in which to further refine the measurement of the problem so that the use of research for policy formation is more effective.

2. Strategies for maximizing school attendance of primary school-aged girls through modification of national policy and institutional change.

---

* For an interesting portrayal of how national interest in the goal of universal enrollment declines as boys enrollment approaches the saturation point, and when the law of diminishing marginal returns in educational expenditure has begun to operate, see Jones' (1982) description of primary school enrollment in Tunisia.

3. Policies and program innovations aimed at the special problems of rural girls and girls from lower socioeconomic groups.

A. Recommendations for Further Refinements in Measurement

The problems of children who remain outside the educational system, either because they never attended or because they had to drop out, are not adequately measured by the existing indicators of educational access. Notably deficient are data for measures estimating:

- rural/urban differences in enrollment according to the age and sex of pupils;
- type of school available (e.g., coeducational, sex-segregated, religious school, private school);
- whether lower primary, upper primary, or both are present in local communities (i.e., an estimate per village of available schools by type of school, according to village population size);
- the mean number of primary school years available in a local community by sex of student;
- admission requirements by type of school (e.g., ethnic, age, sex, financial, religious status, caste, etc.).

Also lacking are measures of the types of local curricula available, such as:

- subjects covered (academic, non-academic, vocational, technical);
- language used in school (languages taught orally, in writing), compared to languages spoken and written in the home;
- available textbooks according to subject taught and language used.

School schedule options available in local communities should also be reported:

- day and/or night school availability;

- attention of school scheduling to seasonal demands for child labor;

- school and staff utilization (e.g., single/double/multiple shifts and staff rotation).

Survey research projects that study the reasons for dropping out of school or excessive repetition should pay greater attention to assessing whether primary schools are complete (first six years available) or incomplete (only a few years available). In a number of studies reviewed, the choices given to respondents for their reasons for not attending school did not include the unavailability of upper primary school grades. Estimates of the average distance required to travel in order to gain access to an upper primary school class were also lacking. Measures of sex differences in opportunities for school attendance, distances from school, and, in general, school performance are notably lacking.

B. Recommendations to Maximize School Attendance of Primary School Girls

The following subsets of recommendations are grouped into four broad areas for discussion: (1) macrostructural, (2) national policy formation and educational planning for institutions, (3) specifically improving girls' retention and completion, and (4) mobilizing community support.

Macrostructural

Greater economic development, improved primary health care, and increased efforts at family planning and maternal and child health programs for mothers and infants, are often perceived as important components to increased educational opportunity for girls. Yet, as mentioned earlier in this report, these meritorious and highly relevant goals are increasingly difficult to attain, given the directions that nations are headed economically—towards even greater competition for scarce resources, troublesome inflation, high unemployment, deep recessions, and increasing political unrest among the disadvantaged.

In addition, these factors are typically outside of the scope of direct influence of educational planners and policymakers. Yet attention by educational planners to the general economic development of a nation and to the bureaucratic capacity to implement educational programs improves the likelihood of designing realistic programs, given the

current situation.

National Policy Formation and Educational Planning at the Institutional Level

The ultimate goal of universal primary school enrollment requires sub-goals which address the particular problems of those not yet enrolled and of those who have dropped out and which simultaneously maintain or improve the quality of schools. National policy that calls for compulsory education, tuition-free schools, teacher training, and school construction can make an important contribution toward universal primary school education. Policies recommended to specifically improve girls' access to schools must press beyond these exemplary efforts. Areas where additional innovations could be made include:

The Implementation of Compulsory Education

- the support of governmental appeals calling for compulsory schooling through federal and state legislation, and follow-up on its enactment;

- the enactment and enforcement of legislation prohibiting the use of child labor, at least during school hours;

- the development of a cadre of government employees responsible for motivating communities to comply with universal school attendance in primary schools, i.e., social workers, extension educators, local government officials, and village chiefs;

- the identification of areas where maldistribution is severe and where incomplete primary schools exist and could be completed preceding large-scale school construction efforts.

Teacher Shortages

- the recruitment of local primary school graduates into the civil service as teacher assistants, especially in schools where the higher educated, urban-oriented certified teachers are unwilling to go. In addition, these teacher assistants may be offered opportunities for secondary school diplomas, teacher certification, and promotion through special teacher-training sessions, correspondence courses, and night school;

- the construction of boarding schools for young women to study for secondary school completion and teacher certification while reducing daily transportation problems to and from school.

The Promotion of Textbooks and Educational Materials

- the subsidizing of textbooks by the federal government and the instituting of simple yet effective supply distribution systems for textbooks. Governments should ensure that textbooks are free of charge and readily available;

- the promotion of opportunities for reading through government subsidies of paperback books for children in villages that are simple, colorful, relevant and inexpensive. Local conditions should be stressed in these books for children, yet stereotypical versions of male and female roles ought to be discouraged. A wide range of useful subjects from agricultural to mathematical skills might be covered, based possibly upon local folktales and contemporary stories. Local authorship should be encouraged through public campaigns and competition for prizes to local authors who write good stories.

Curriculum Relevance

- the appraisal by government agencies and educational planners of state and federal examination and promotion procedures required of primary school children. Attempts should be made to increase the options available to children attending primary schools. Primary education, rather than being viewed as a stepping-stone to secondary education, should be instituted as a valuable form of certification by itself. Options for vocational, technical, and general academic skills should be available to all students, and promotion to the next grade level should not be based solely upon national or state examination scores. Innovative primary school student evaluation procedures need to be instituted rather than highly prescribed academic criteria that tend to be based primarily upon rote learning and memorization;

- the implementation of policies and plans to broaden the national curriculum of primary schools to vocational and technical training, thereby lessening the burden upon secondary schools for this purpose.

Such a plan should work to improve the relevance of primary schools to older students, especially girls. The general expansion of the curriculum would be aimed at decreasing the number of dropouts and making vocational and technical training available to children who would otherwise never qualify for such programs, because they will not make it to secondary school.

Improving Retention and Completion.

Solutions to the existing problems do not simply consist of increasing the volume of enrollments. Although increased enrollments can be substantial, they may only cover the increased numbers of children entering the system from population growth (Frederiksen, 1982). About 15 percent of developing countries' increased capacity was consumed in repetition and about 40 percent of children starting in the first grade had dropped out by the fourth grade (Frederiksen, 1982). Planners must therefore be concerned with a decline in the quality of education resulting from rapid increases in the numbers enrolled both from population growth and from improvement in enrollment rates which are not supported by commensurate increases in educational funds and resources.

The dilemma between the desired rapid large-scale enrollment increases and the resultant likelihood of reductions in the quality of schooling was discussed in a theoretical expose by Smyth (1982). Smyth noted that the general policy question found in countries which "are yet a long way from achieving universal primary education was whether to reduce quality, or to redefine it at a lower and less costly level, in order that a larger proportion of children can receive at least some sort of education rather than none at all" (item 13). Smyth also noted, however, that if Upper Volta were to increase its gross enrollment ratio in primary school from 16 to 100 percent, while holding expenditures on primary education constant, the pupil/teacher ratio would have to be increased from 51 to 319. He concluded that a primary school education with a pupil/teacher ratio of 319 could hardly be called education. Alternatively, if the cost per pupil were to be maintained by reductions in teachers' salaries, the average salary of teachers would have to be lowered by about 93 percent. Given the strong economic and resource constraints in such countries, solutions other than simple extensions of the existing system must be found if most children, and especially girls, are ever to be included in the mainstream of primary education.

One suggestion for increasing the source of funds available to primary schools is through returning some of the recently redirected funds aimed at secondary and university levels back to the primary school level (Johnston and Clark, 1982; Fredriksen, 1982).

> The wisdom of continued rapid expansion of post-primary education in cases where "educated" unemployment coexists with large numbers of children not having access to primary education seems highly questionable from an economic as well as from a social point of view (Fredriksen, 1982, npn).

Another suggestion for increasing primary school budgets in order to improve school quality is to search for sources of funding from donor nations and interested international groups (Romain, 1982). The major shortcoming of this is that the solution is usually short-term.

In addition to simply increasing the budget, governments should also consider reforms that go beyond recommendations for the simple expansion of the existing system, and seek alternative and less expensive solutions. In addition to the earlier recommendations, which in many respects serve the dual purpose of increasing girls' enrollments and improving the quality of primary schools, other innovations may be tried. Some of the less costly alternatives already successfully tried include innovations such as the utilization of adult primary school graduates as primary school teachers in order to increase teaching staff in rural communities and urban slums (Lockheed and Jamison, 1979). Community leaders and educated adults may volunteer to teach night school classes to children who cannot attend school during the day (Naik, 1982). Communities may also be encouraged to help build schools on a volunteer basis, or to volunteer space for night classes during off-peak hours in available existing buildings (Naik, 1982).

Mobilizing Community Support

One important element of educational reform is to stress the importance of girls' education when formulating plans for community development. Recommendations include:

- the targeting of educational funds and resources specifically to groups of children who remain outside the primary school system. One important group to target is girls from lower socioeconomic groups and from rural areas;

- the formation of a central board for educational innovation and reform to oversee extrabudgetary allocations of funds for special projects aimed especially at increasing rural and poor girls' educational opportunities;

- the awarding of financial or other types of indirect positive incentives to communities for community efforts to institute school programs seeking solutions to local developmental problems such as:

- breakfast or snack programs for children who attend school;

- vocational programs that culminate in useful community projects, that are organized by school children and teachers in conjunction with interested community leaders, i.e., health or immunization campaigns, school construction, child care programs, water sanitation projects, gardening projects or animal production used for school snack and breakfast programs.

- the recognition of provincial and village level leaders who support girls' enrollment through the use of newspaper and radio campaigns. The attempts of individuals for educational innovation at local levels need to be recognized and reinforced;

- the institution of radio and television programs highlighting positive aspects of schools, school experiences, and meaningful approaches to homework.

Reforms for community mobilization should not be confined to the modification of policies and plans at the national level. Community level development programs can also design educational reforms to be instituted at local levels.

Communication and Education

- School broadcasts or local radio programs prepared for teachers, parents, and children can stimulate interest in the utilization of indigenous music, poetry, and folktales in early education. Broadcasting is an important outlet for local art and language, as well as an outlet for airing local problems. It is essential that local broadcasts use indigenous languages, especially in areas having high illiteracy rates for women, so that women and girls will understand the

programs.

- Special language classes could also be instituted on radio to help break the language barriers between home and school, when they exist.

- Simple presentations can be conducted using cheap educational tools out of locally available resources for use by interested parents and teachers. Their proper utilization can be acted out in broadcasting skits and at teacher-training sessions.

Local Labor Force Development

- Community attempts to recruit local secondary matriculates, especially from the large numbers of unemployed graduates, to cover teaching positions in primary schools might help to offset the imbalance in the distribution of teachers toward urban, middle-class areas. Secondary graduates who are locally employed could be used to teach evening classes for school dropouts in local areas. This type of recruitment has been tried in rural India (Naik, 1982) and was a significant factor in decreasing the dropout rate of children, especially girls.

- Adult primary school graduates (especially women) who live in the area could be locally recruited and trained when insufficient numbers of secondary graduates are available as teachers. Arrangements could be made for certified teachers who live in the area to supervise and assist them and to act as mentors. These strategies were tried in Tanzania and Nepal and they substantially increased the number of teachers available to work in isolated areas.

Redesigning the Use of Existing School Facilities

- In areas where schools are segregated by sex and institutional facilities have not been built for girls, the establishment of double shifts in available schools could effectively allow women teachers and girl students to gain access to school facilities.

- Village school systems having facilities sufficient for lower primary classes only should institute double-shift programs to allow the school facilities to be

used for upper primary classes.

- When upper primary schools are available nearby and are mainly used by local boys who can travel farther from home, the double-shift procedure could be used effectively to gain upper primary school facilities for girls through the use of lower primary schools during late afternoon or evening hours.

C. Programs Directed at the Special Problems of Girls

Girls' primary school enrollment may be increased by incorporating into the school system institutional adaptations for some of the special characteristics of girls.

- School policies designed to increase primary school attendance of older girls or girls have heavy domestic responsibilities or who work outside the home, must consider the possibility of planning multiple entry points into the primary educational system, as well as alternative hours and seasons for class sessions that would not conflict so severely with employment responsibilities of young women.

- The kinds of work girls pursue as women must be acknowledged in primary school curricula in order to make school more relevant to the reality of girls lives. Vocational education needs to be instituted into the curriculum of primary schools in areas relevant to their expected occupations, e.g., bookkeeping, business arithmetic, and marketing skills for girls involved in trading in Africa. Such an orientation toward learning might greatly enhance parents' enthusiasm for their daughters' attendance.

- Schools must recognize the responsibility of girls for their younger siblings. Children should be allowed to bring toddler siblings to school and provide for their care thorugh a rotational system of older school-aged children. A child-care system for younger siblings could be placed under the supervision of teacher aides who are paid a nominal fee for their assistance. A nursery school program thereby supports older siblings' attempts at school attendance. This is especially a possibility in tropical areas or during warm seasons when young children can be organized to play and sleep out of doors.

- The grouping of preschool toddlers near primary schools can also provide an excellent opportunity to socialize young children about school and to institute preventive health measures such as innoculation campaigns for young children. The utilization of growth charts and simple lessons on oral rehydration can be taught to older children and their application tried on available youngsters as a way of increasing interest in public health while also instructing older students to measure and count. Again, the usefulness of these activities should increase parental enthusiasm and interest in school attendance of older siblings, especially girls.

In sum, what these suggested reforms call for is greater attention to the community and institutional problems inhibiting girls' school attendance. If child-care responsibilities are excessive for young girls, then solutions for child care should be incorporated into the existing curriculum of the school. If curricula are irrelevant, then a search should ensue for local projects to make them meaningful. If girls cannot attend because they work during school hours, then options should be given to them to attend classes at other more convenient times. Mobile units may be tried in order to bring the schools to the work location of children, when it is impossible for the children to come to the schools. A great number of the remaining problems discouraging girls' school attendance call for highly specific actions at local levels while being effectively supported by political and governmental concern for their enactment.

Many of the arguments that have been used by observers to explain the inequality of girls' educational opportunities have stressed the cultural heritage and ideological beliefs of traditional societies. Fathers are often blamed for being disinterested in their daughters' educational welfare; teachers are accused of neglecting girls' educational development; certain religions are said to limit girls' opportunities; women are viewed as passive recipients of traditional prescriptions and men as the producers of traditional oppression. These often erroneous and misleading conclusions are frequently derived from short-term field observations at the village level or through selective investigations into the cultural constraints of traditional societies.

This paper has tried to broaden the discussion of the determinants of girls' primary school participation by looking at specific socioeconomic, institutional, and household factors, amenable to policy intervention, that may better explain girls' lower participation and higher wastage rates in primary schools in the developing world. A

continued national emphasis upon primary education, compensatory policies for the education of poor children, increased emphasis upon coeducation or at least a redistribution of the use of sex-segregated schools, increased numbers of female teachers, increased curriculum relevance, greater opportunity for vocational training in primary school especially for older primary school students, increased availability of educational materials, flexible school schedules, and innovative child-care programs may be important measures to improve the attendance of children and especially girls in primary schooling in the Third World.

TABLE 1

PRIMARY SCHOOL GROSS ENROLLMENT RATES OF LEAST DEVELOPED COUNTRIES BY SEX OF PUPIL

COUNTRY	YEAR	TOTAL	FEMALE	MALE
AFRICA				
Benin	1979	60	42	78
Botswana	1979	89	98	80
Burundi	1978	21	17	26
Centr. Afr. Rep.	1977	78	55	101
Gambia	1978	37	24	50
Lesotho	1976	105	125	86
Malawi	1977	53	42	63
Mali	1978	28	20	36
Niger	1977	22	16	29
Rwanda	1976	64	59	68
Somalia	1977	44	32	57
Sudan	1978	50	42	58
Tanzania	1976	70	..	..
Tchad	1976	35	19	51
Uganda	1977	50	41	58
Upper Volta	1978	17	12	21
ASIA				
Afghanistan	1977	20	6	33
Bangladesh	1978	67	46	87
Bhutan	1978	12	7	16
Laos	1977	92	85	99
Nepal	1977	60	31	104
North Yemen	1975	29	7	50
South Yemen	1977	72	51	92

Note: No data available for Africa: Comores, Ethiopia, Guinea, Cape Verde; Asia: Maldives; Pacific: Samoa; America: Haiti.

Source: L.F.B. Dubbeldam, 1982. "Primary Education in the Third World An Overview of Quantity and Quality." Paper presented at the Oslo Seminar Programme on Education in Developing Countries, October 1982, University of Oslo, Table 6. Data were taken from the Unesco Statistical Yearbook, 1980.

TABLE 2

ENROLLMENT RATES AND REPRESENTATION INDICES
FOR FEMALE PRIMARY ENROLLMENT IN THE SUDAN (1977-78)

COUNTRY AND PROVINCE	ENROLLMENT RATES (TOTAL GRADES) FEMALE	MALE	REPRESENTATION INDEX (TOTAL GRADES)[1] FEMALE	MALE
SUDAN				
Nile	86	100	2.14	2.75
Khartoum	71	81	1.78	2.24
Northern	67	70	1.67	1.92
El Gazira	55	60	1.37	1.65
Red Sea	48	56	1.20	1.55
Kassala	32	43	0.79	1.19
S. Kordofan	31	58	0.77	1.60
Blue Nile	30	56	0.75	1.54
W. Equatoria	28	60	0.70	1.66
White Nile	23	54	0.59	1.50
E. Equatoria	21	48	0.52	1.32
N. Kordofan	19	23	0.47	0.65
N. Darfur	18	42	0.46	1.16
S. Darfur	10	16	0.24	0.43
Upper Nile	10	25	0.26	0.68
Jonglie	3	15	0.90	0.56
Lakes	3	11	0.07	0.31

1. This representation index compare local primary enrollment rates for females and males to their expected rates (that is, the female and male enrollment rates for the nation). The representation index is an indication of whether females or males are under - or over-represented in each province when compared to national enrollment rates and to what degree they are under - or over-represented (See Maas and Criel, 1982: 4-5).

Source: Maas, Jacob van Lutsenburt, and Geert Criel, 1982. Distribution of Primary School Enrollments in Eastern Africa. World Bank Staff Working Papers, Number 511. Tables 4-5, pp. 18-19.

TABLE 3

THE PERCENTAGE OF 1970 FIRST YEAR PUPILS
REACHING EACH CONSECUTIVE YEAR OF PRIMARY SCHOOLING BY SEX OF CHILD
FOR THE REGIONS OF THE WORLD WITH LOWEST ENROLLMENT (APPARENT COHORTS)

REGION		PERCENT OF FIRST-YEAR PUPILS REACHING EACH YEAR OF PRIMARY SCHOOL				
		1st	2nd	3rd	4th	5th
AFRICA						
Eastern Africa	F	100	80	72	67	54
	M	100	80	74	66	56
Middle Africa	F	100	67	58	45	39
	M	100	71	64	53	49
Northern Africa	F	100	94	92	94	83
	M	100	95	94	98	89
Western Africa	F	100	83	79	69	61
	M	100	82	76	67	62
AMERICA						
Caribbean	F	100	66	61	58	52
	M	100	61	53	50	44
Middle America	F	100	72	63	54	45
	M	100	68	61	54	47
Temperate	F	100	83	78	73	68
South America	M	100	82	75	70	63
Tropical	F	100	59	49	41	36
South America	M	100	59	45	40	36
ASIA						
Eastern	F	100	83	75	64	49
South Asia	M	100	83	76	65	52
Middle	F	100	62	50	41	31
South Asia	M	100	65	55	49	39
Western	F	100	88	83	78	72
South Asia	M	100	88	85	83	77

Source: UNESCO Office of Statistics, Etude Comparative de la Scolarisation des Filles et des Garcons: Une Analyse Statistique 1965-1975 (published in the series 'Enquetes et recherches statistiques: travaux en cours') and taken from Table 8 of Deble, 1980. The School Education of Girls (Paris: UNESCO), p.63.

SEX DIFFERENCES IN PRIMARY SCHOOL WASTAGE IN THE AFRICAN AND ARAB REGIONS

TABLE 4

DERIVED FROM THE SCHOOL HISTORY OF COHORTS

BEST COPY AVAILABLE

REGION	SCHOOL COHORT (YEAR)	PRESCRIBED DURATION OF ATTENDANCE	AVERAGE PUPIL/YEARS INVESTED PER PRIMARY GRADUATE (F)	(M)	ADDITIONAL PUPIL/YEARS INVESTED PER PRIMARY SCHOOL GIRL GRADUATE (F) - (M)	INPUT/OUTPUT RATIO[1] (F)	(M)
AFRICA							
Malawi	1972/73	6	23.8	17.7	+ 6.1	2.98	2.22
Central African Republic	1966/67-69/70	6	19.3	13.6	+ 5.7	3.22	2.27
Zaire	67/68-70/71	6	16.3	11.7	+ 4.6	2.72	1.95
Ghana	69/70-70/71	10	18.8	14.4	+ 4.4	1.88	1.44
Ivory Coast	65/66-68/69	6	13.0	10.2	+ 2.8	2.17	1.70
Gabon	71/72	6	15.0	12.3	+ 2.7	2.50	2.05
Togo	67/68-72/73	6	13.9	11.7	+ 2.2	2.31	1.94
Tanzania	68/69-70-71	7	11.1	9.3	+ 1.8	1.59	1.33
Dahomey	67/68-72/73	6	11.6	9.8	+ 1.6	1.93	1.63
Cameroon	71/72	6	12.0	10.4	+ 1.6	2.00	1.83
Congo	67/68-72/73	6	12.4	11.0	+ 1.4	2.06	1.83
Burundi	66/67-69/70	6	16.6	15.3	+ 1.3	2.76	2.54
Madagascar	68/69-70/71	6	15.9	14.1	+ 1.1	2.65	2.34
Senegal	65/66-70/71	6	9.8	8.8	+ 1.1	1.64	1.46
Niger	68/69-72/73	6	12.1	11.1	+ 1.1	2.03	1.85
Rwanda	69/70-71/72	6	17.0	16.0	+ 1.0	2.84	2.67
Mali	66/67-69-70	6	14.2	13.6	+ 0.6	2.37	2.27
Upper Volta	64/65-69/70	6	11.6	11.1	+ 0.5	1.93	1.85
Kenya	69/70-72/73	7	8.7	8.3	+ 0.4	1.24	1.18
Gambia	67/68-72/73	6	7.8	7.5	+ 0.3	1.30	1.24
Swaziland	68/69-72/73	7	11.4	11.4	+ 0.0	1.63	1.63
Botswana	68/69-71/72	7	8.9	9.1	- 0.2	1.27	1.30
Lesotho	70/71-72/73	7	14.7	16.7	- 2.0	2.10	2.38
ARAB REGION							
Egypt	67/68-71/72	6	8.2	7.0	+ 1.8	1.36	1.17
Algeria	71/72	6	9.8	9.2	+ 0.6	1.63	1.53
Libya	70/71-72/73	6	7.1	6.7	+ 0.4	1.18	1.12

Source: UNESCO (1975) Wastage in Primary Education in Africa: Statistical Study

[1] The Input/Output Ratio compares the number of pupil-years spent in school per graduate to the prescribed duration of the cycle. Its minimum val[illegible]

BEST COPY AVAILABLE

TABLE 5

THE NUMBER OF PRIMARY LEVEL GRADUATES WHO GRADUATED WITHOUT REPEATING, WHO EVER GRADUATED, AND THE NUMBER WHO DROPPED OUT PER 1,000 ENTRANTS BY SEX OF PUPIL FOR THE AFRICAN AND ARAB REGIONS

REGION	TYPES OF COMPLETION					
	DROPPED OUT OF PRIMARY SCHOOL		GRADUATED WITHOUT REPEATING		TOTAL WHO GRADUATED	
	(F)	(M)	(F)	(M)	(F)	(M)
AFRICAN[1]						
Malawi	785	685	37	69	215	315
Central Afr. Rep.	784	681	30	45	216	319
Rwanda	731	702	47	53	269	298
Burundi	725	683	70	78	275	317
Madagascar	685	622	49	55	315	378
Zaire	679	492	57	104	321	508
Ghana	647	475	269	417	353	525
Mali	614	612	37	57	386	388
Gabon	607	507	34	40	359	453
Upper Volta	599	582	110	124	401	418
Dahomey	588	486	83	128	412	514
Niger	587	541	97	117	413	459
Lesotho	572	680	99	76	428	320
Tanzania	558	429	389	491	448	571
Cameroon	552	480	81	89	448	520
Ivory Coast	541	370	53	86	459	630
Togo	538	383	31	46	462	617
Congo	535	473	69	85	465	527
Swaziland	472	476	163	147	528	524
Senegal	415	320	161	196	585	680
Botswana	352	382	596	579	648	618
Kenya	253	234	494	511	747	766
Gambia	250	129	377	383	750	871
ARAB REGION[2]						
Iraq	408	295	165	183	592	705
Algeria	389	338	247	282	611	662
Egypt	377	171	441	589	623	829
Bahrain	285	309	241	164	715	691
Syrian Arab Rep.	252	179	433	467	748	821
Jordan	209	137	595	667	791	863
Saudi Arabia	195	291	305	172	805	749
Libyan Arab Jamahiriya	174	101	526	576	826	899

[1]Source: UNESCO, 1975. Wastage in Primary Education in Africa: Statistical Study (CSR-E-11). Cohort estimates are from years close to 1970.

[2]Source: UNESCO, 1977. "Recent Quantitative Trends and Projections Concerning Enrollment in Education in the Arab Countries." Presented at The Conference of Ministers of Education and Those Responsible for Economic Planning in the Arab States (United Arab Emirates, 7-16, November). (ED-77/MINEDARAB/Ref.3) Table 22, p.39.

BEST COPY AVAILABLE

TABLE 6

MEAN SIZE OF RURAL POPULATION BY REGION FOR PREDOMINANTLY RURAL OR URBAN COUNTRIES ACCORDING TO THEIR LEVELS OF AGE-SPECIFIC ENROLLMENT IN SCHOOL FOR GIRLS AGED 6-11

REGION	AVERAGE RURAL POPULATION SIZE			
	PREDOMINANTLY RURAL COUNTRIES		PREDOMINANTLY URBAN COUNTRIES	
	LOWER ENROLLMENT 50%	HIGHER ENROLLMENT 50%	LOWER ENROLLMENT 50%	HIGHER ENROLLMENT 50%
Africa	11,813.800	4,575,800	*	*
Asia[1]	33,797,200	29,384,700	*	6,277,600
Arab States	5,831,750	2,769,300	7,518,500	2,238,700
Latin America	*	2,574.900	*	9,614,200

*Fewer than 2 observations available.

Source: United Nations, 1982. Estimates and Projections of Urban Rural and City Populations, 1950-2025: The 1980 Assessment, Tables 1 and 3.

This excludes China and India. When India is included in the predominantly rural, high enrollment, the average rural population size of the region jumps from 29,384,700 to 79,684,700. India served approximately half of its girls aged 6-11 in 1980.

TABLE 7

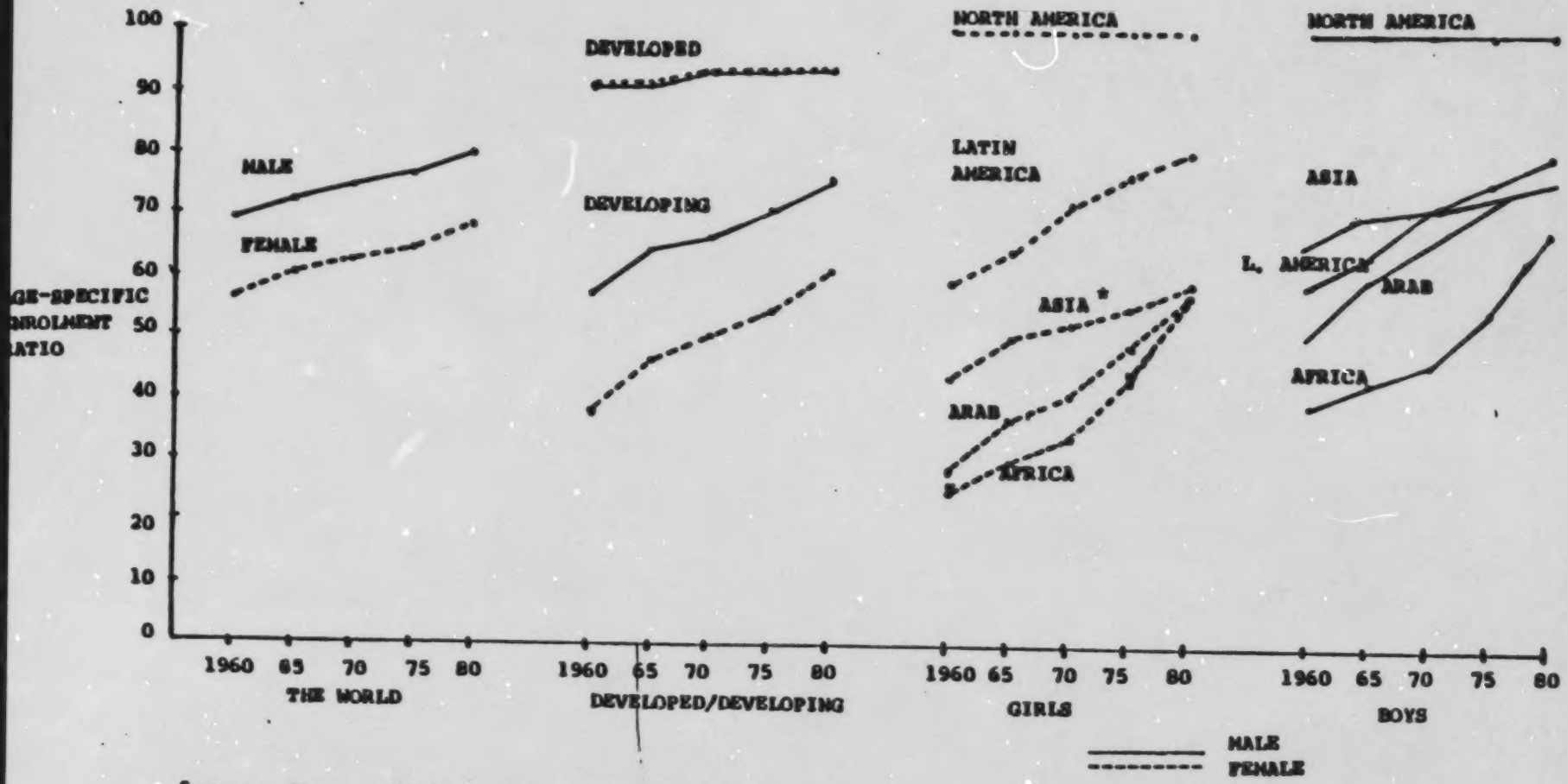
MALE AND FEMALE REPRESENTATION LEVELS IN 16 EAST AFRICAN COUNTRIES FOR PRIMARY SCHOOL ENROLLMENT, IN THE LATE 1970'S

COUNTRY	REPRESENTATION INDEX (RI) FEMALE	MALE
HIGH OR MORE EQUAL REPRESENTATION OF GIRLS		
Lesotho	1.164	0.830
Botswana	1.114	0.887
Swaziland	0.987	1.013
Rwanda	0.951	1.050
Kenya	0.942	1.058
Madagascar	0.939	1.063
Zambia	0.931	1.068
Tanzania	0.918	1.081
LOWER REPRESENTATION OF GIRLS		
Uganda	0.863	1.132
Zaire	0.803	1.189
Malawi	0.781	1.235
Burundi	0.788	1.211
Sudan	0.779	1.232
Somalia	0.751	1.229
Ethiopia	0.552	1.389
South Sudan	0.655	1.330

Source: Maas, Jacob van Lutsenburg and Geert Criel, Distribution of Primary School Enrollments in Eastern Africa, World Bank Staff Working Papers, No. 511, East Africa Regional Office, the World Bank, Washington, D.C. Table 3, p.15.

FIGURE 1

AGE-SPECIFIC ENROLMENT RATIOS FOR CHILDREN AGES 6-11
BY REGIONAL STATUS AND SEX FOR THE YEARS 1960-1980



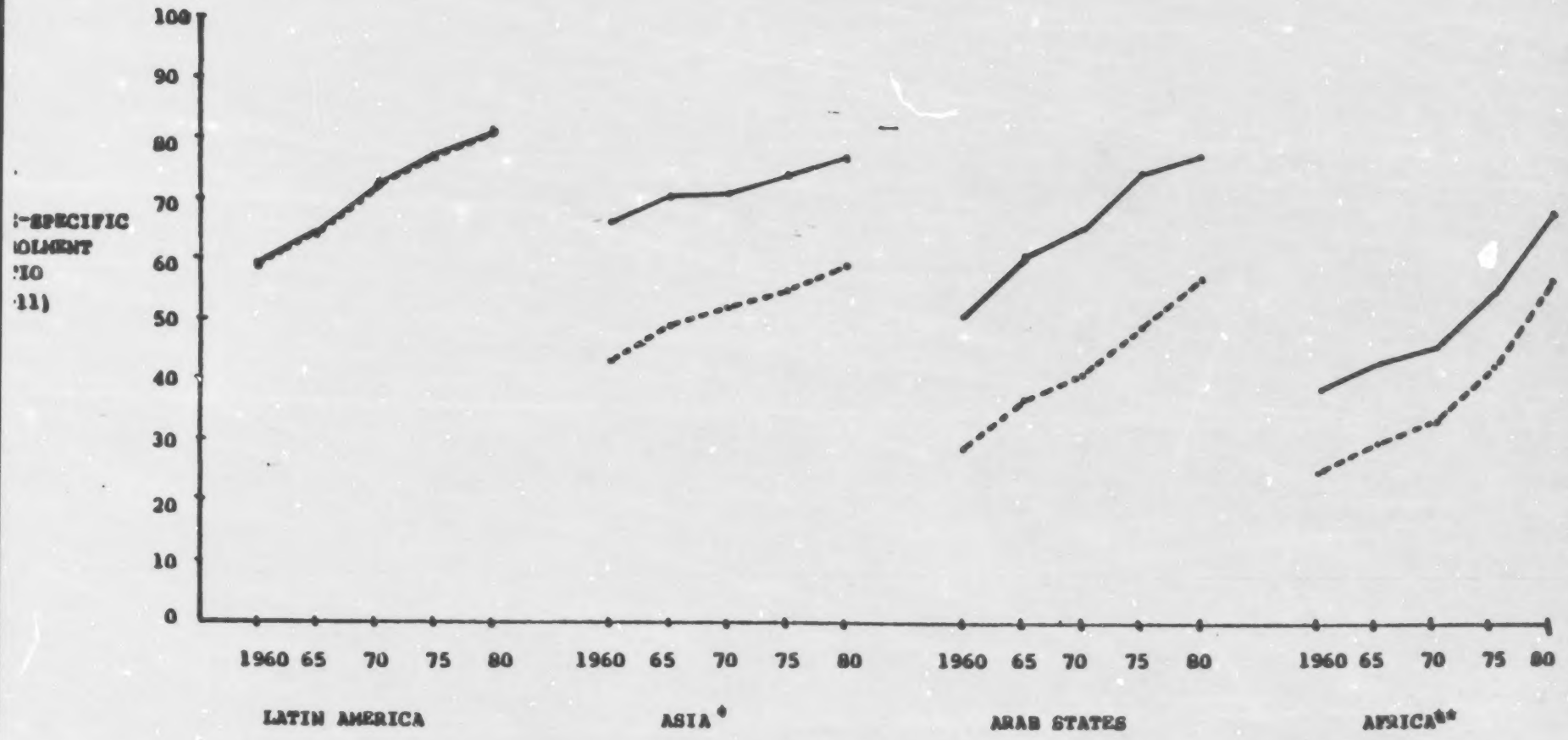
Source: Unesco, 1981. Statistical Yearbook, Table 3.6.

*Excludes China and the Democratic People's Republic of Korea

BEST COPY AVAILABLE

FIGURE 2

AGE-SPECIFIC ENROLMENT RATIOS FOR CHILDREN AGES 6-11
IN MAJOR REGIONS OF THE WORLD
BY SEX OF CHILD 1960-1980

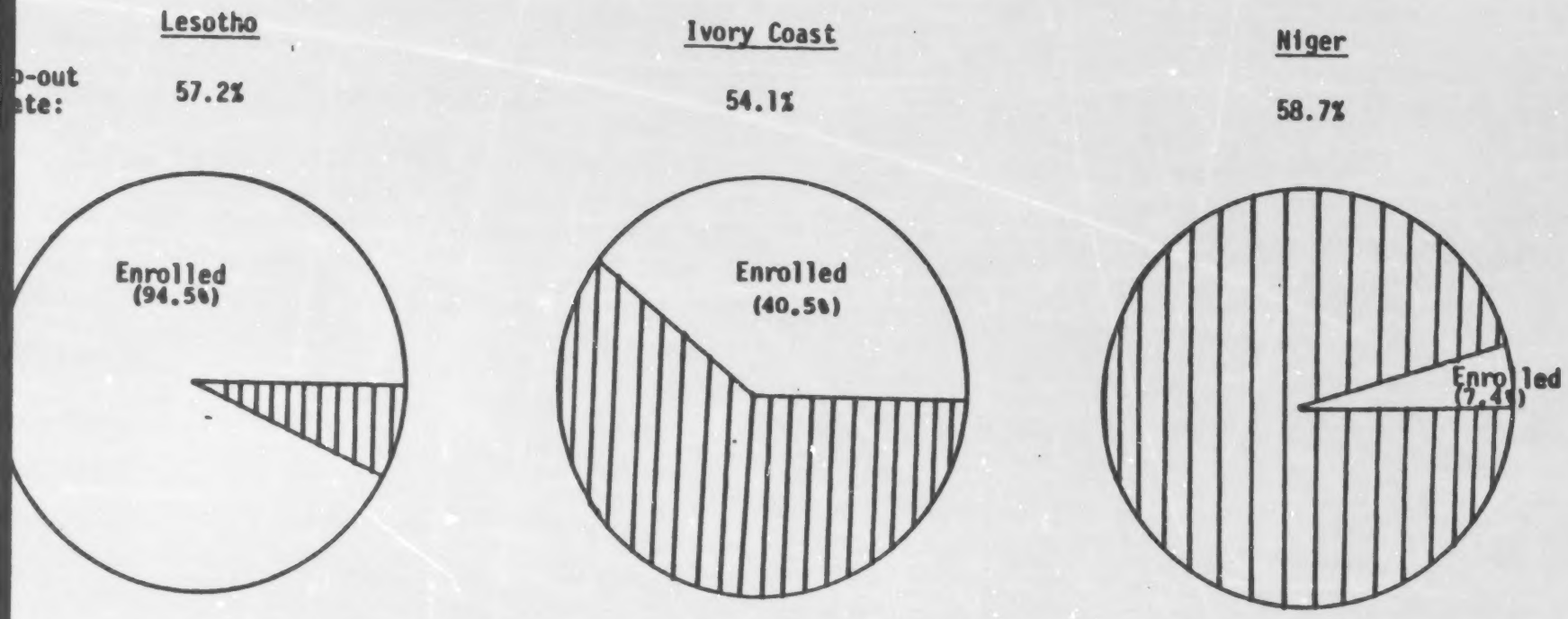


Source: Unesco, 1981. Statistical Yearbook, Table 2.11.
*Excluding the Arab States, China and the Democratic People' Republic of Korea
**Excluding the Arab States.

BEST COPY AVAILABLE

FIGURE 3

THE PERCENT OF GIRLS 6-11 YEARS OLD WHO ATTENDED SCHOOL AND THE DROP-OUT RATE* IN LESOTHO, IVORY COAST AND NIGER IN 1970



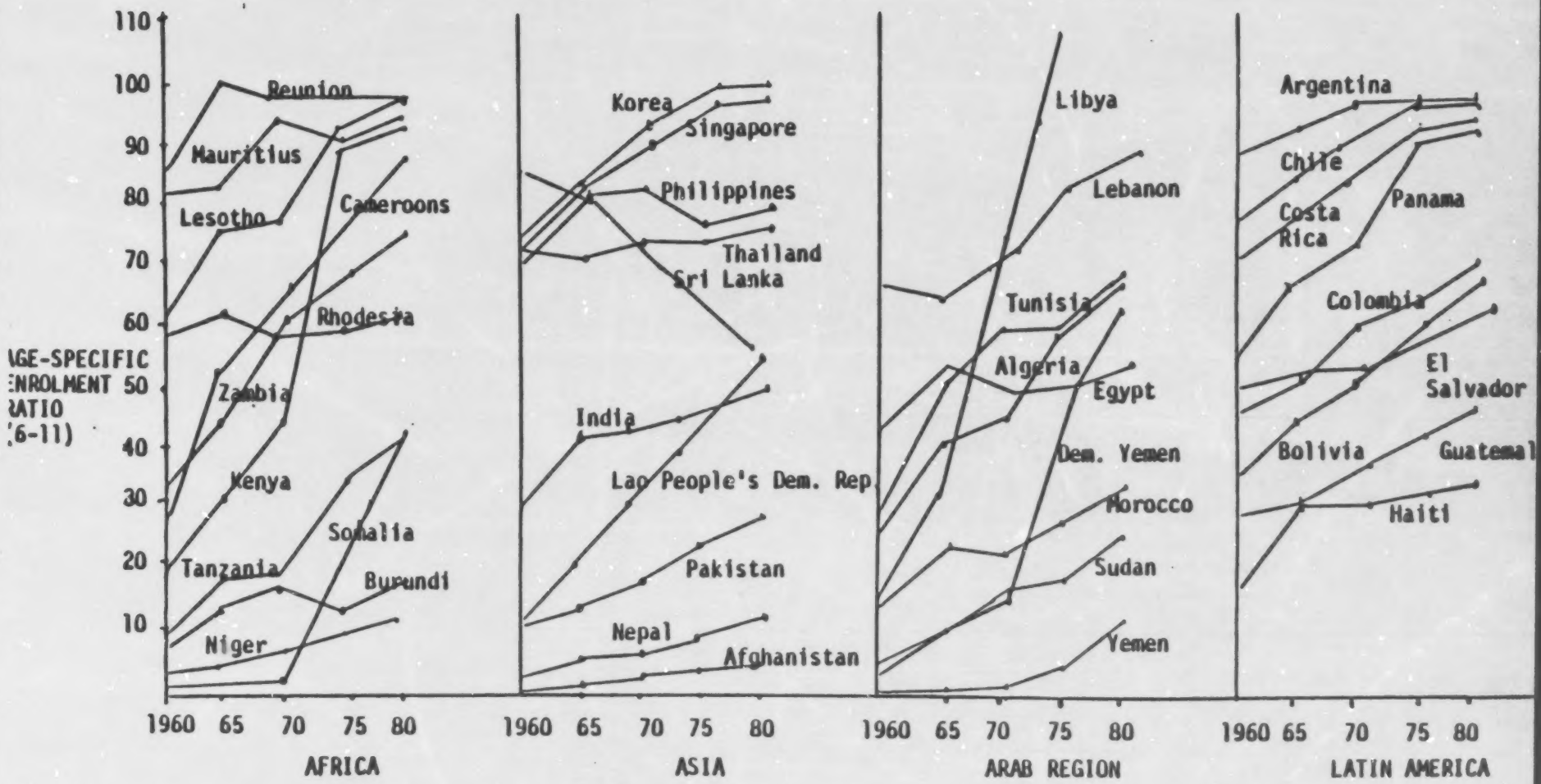
*The drop-out rate is the percent of girls who fail to complete primary school among those entering primary school based upon Unesco estimates of synthetic cohorts for the following years: Lesotho, 1970-71 and 1972-73; Ivory Coast, 1965-66 and 1968-69; Niger, 1968-69 and 1972-73.

Source: Unesco, 1975. Wastage in Primary Education in Africa (drop-out rates); and Unesco, 1977. Trends and Projections of Enrolment by Level of Education and Age, (CSR-E-21), Table VII.

BEST COPY AVAILABLE

FIGURE 4

AGE-SPECIFIC ENROLMENT RATIOS FOR GIRLS AGED 6-11
IN FOUR MAJOR REGIONS OF THE WORLD, BY COUNTRY, FOR THE YEARS 1960-1980

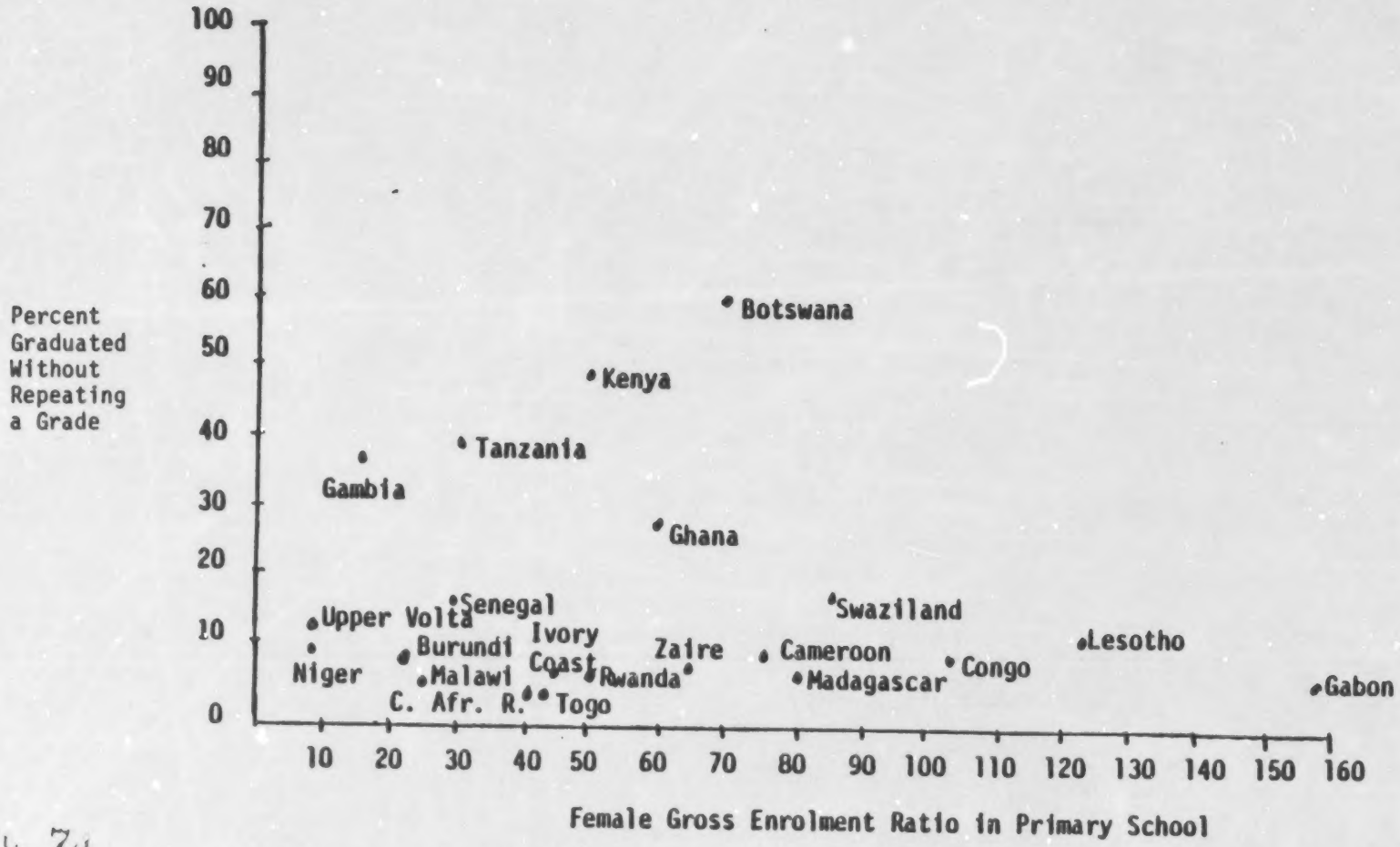


Source: Unesco, 1977. (CSR-E-21), Table VII.

BEST COPY AVAILABLE

FIGURE 5

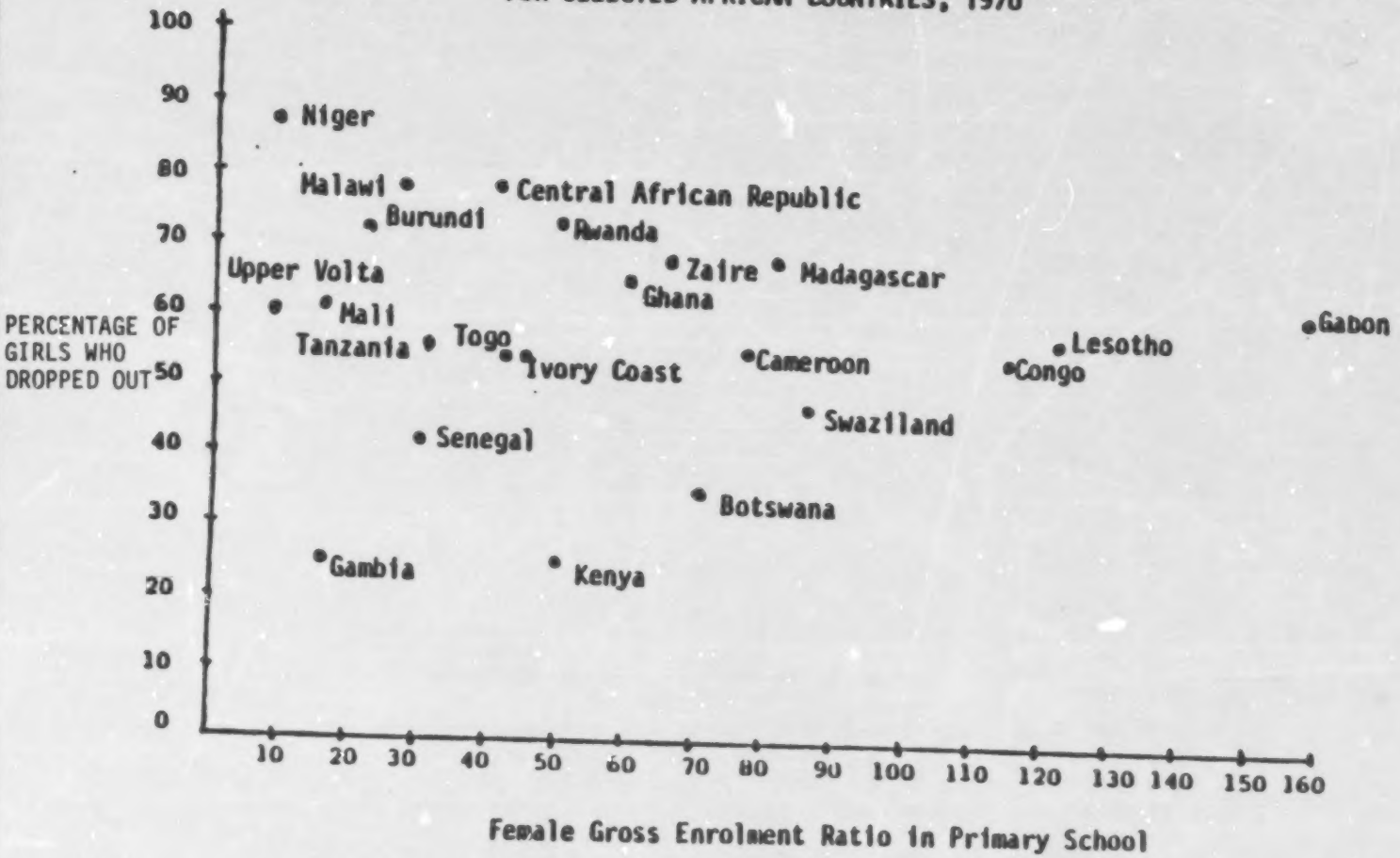
THE PERCENT OF GIRLS ENROLED IN PRIMARY SCHOOL WHO GRADUATED WITHOUT EVER REPEATING A GRADE ACCORDING TO THE GROSS ENROLMENT RATIO OF FEMALES IN PRIMARY SCHOOL FOR SELECTED AFRICAN COUNTRIES, 1970



Source: Unesco, 1975. Wastage in Primary Education in Africa (repetition rates); and Unesco, 1982. Development of Education in Africa: A Statistical Review, (ED-82/MINEDAF/Ref. 2), (1970 gross enrolment ratios).

FIGURE 6

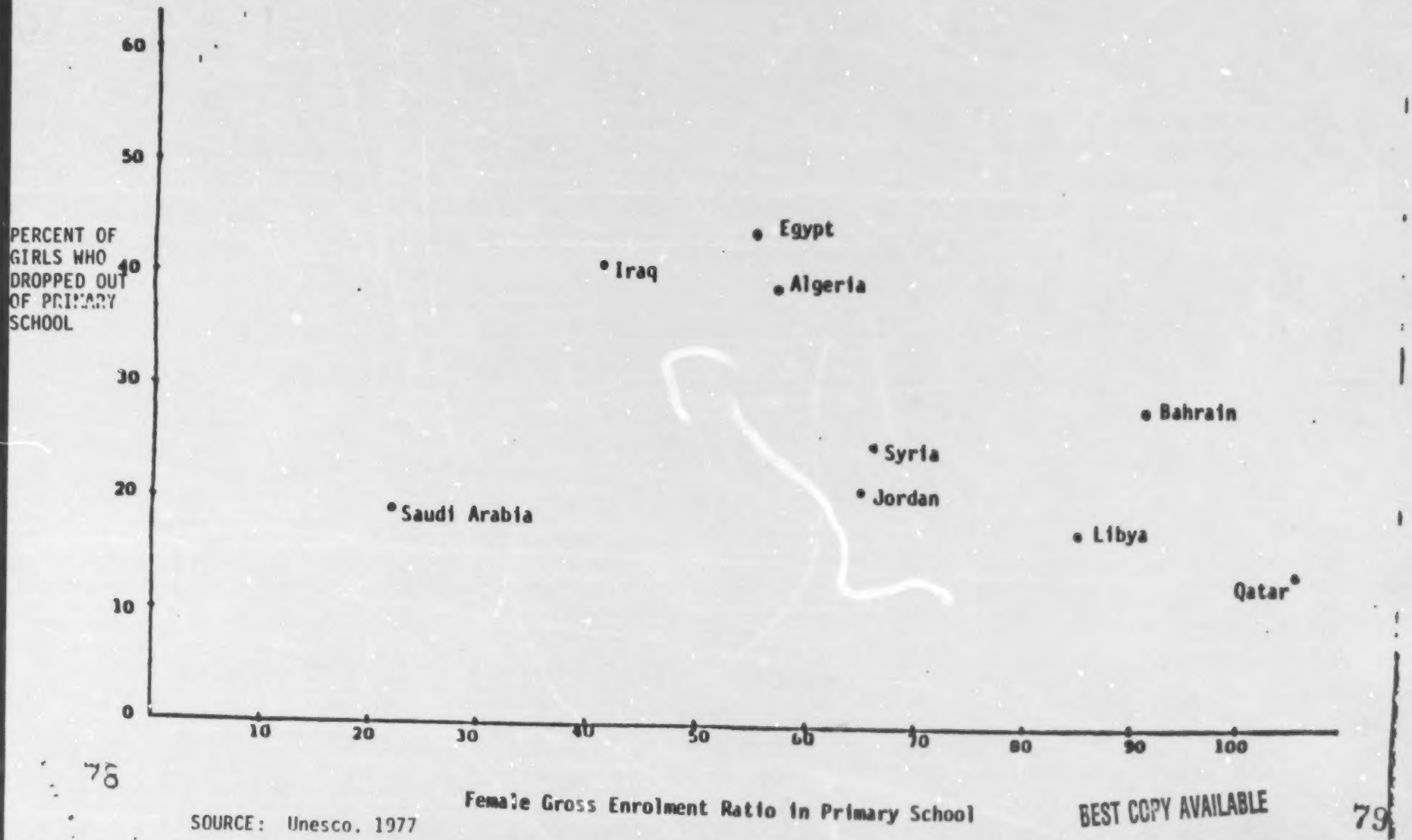
THE PERCENT OF GIRLS WHO DROPPED OUT OF PRIMARY SCHOOL ACCORDING TO THE GROSS ENROLMENT RATIO OF FEMALES IN PRIMARY SCHOOL FOR SELECTED AFRICAN COUNTRIES, 1970



Source: Unesco, 1975. Wastage in Primary Education in Africa (drop-out rates); and Unesco, 1982. Development of Education in Africa: A Statistical Review, (ED-82/MINEDAF/Ref.2), (1970 gross enrolment ratios).

FIGURE 7

THE PERCENT OF GIRLS WHO DROPPED OUT OF PRIMARY SCHOOL
ACCORDING TO THE FEMALE GROSS ENROLMENT RATIO IN PRIMARY SCHOOLS FOR THE ARAB REGION, 1970

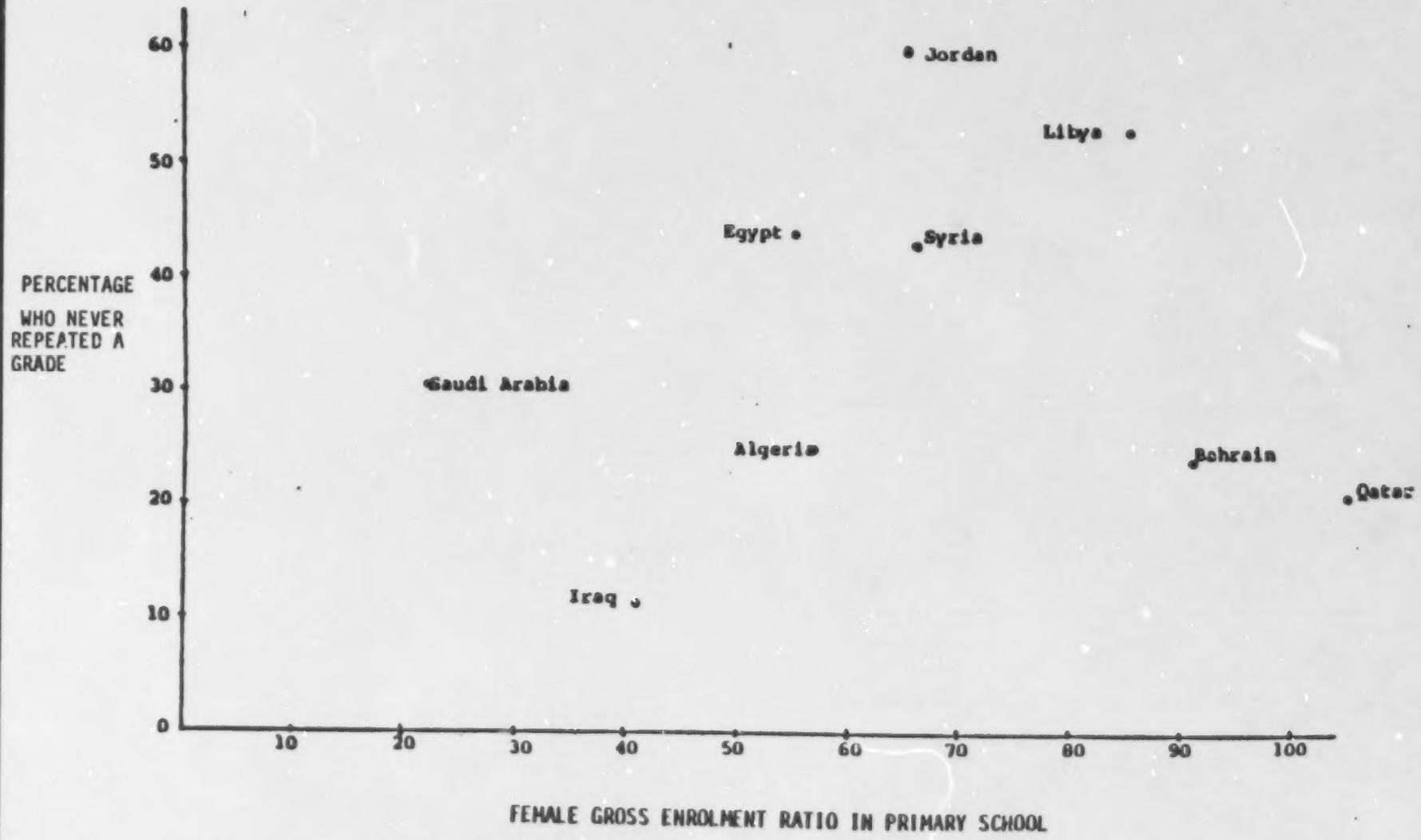


SOURCE: Unesco, 1977

BEST COPY AVAILABLE

FIGURE 8

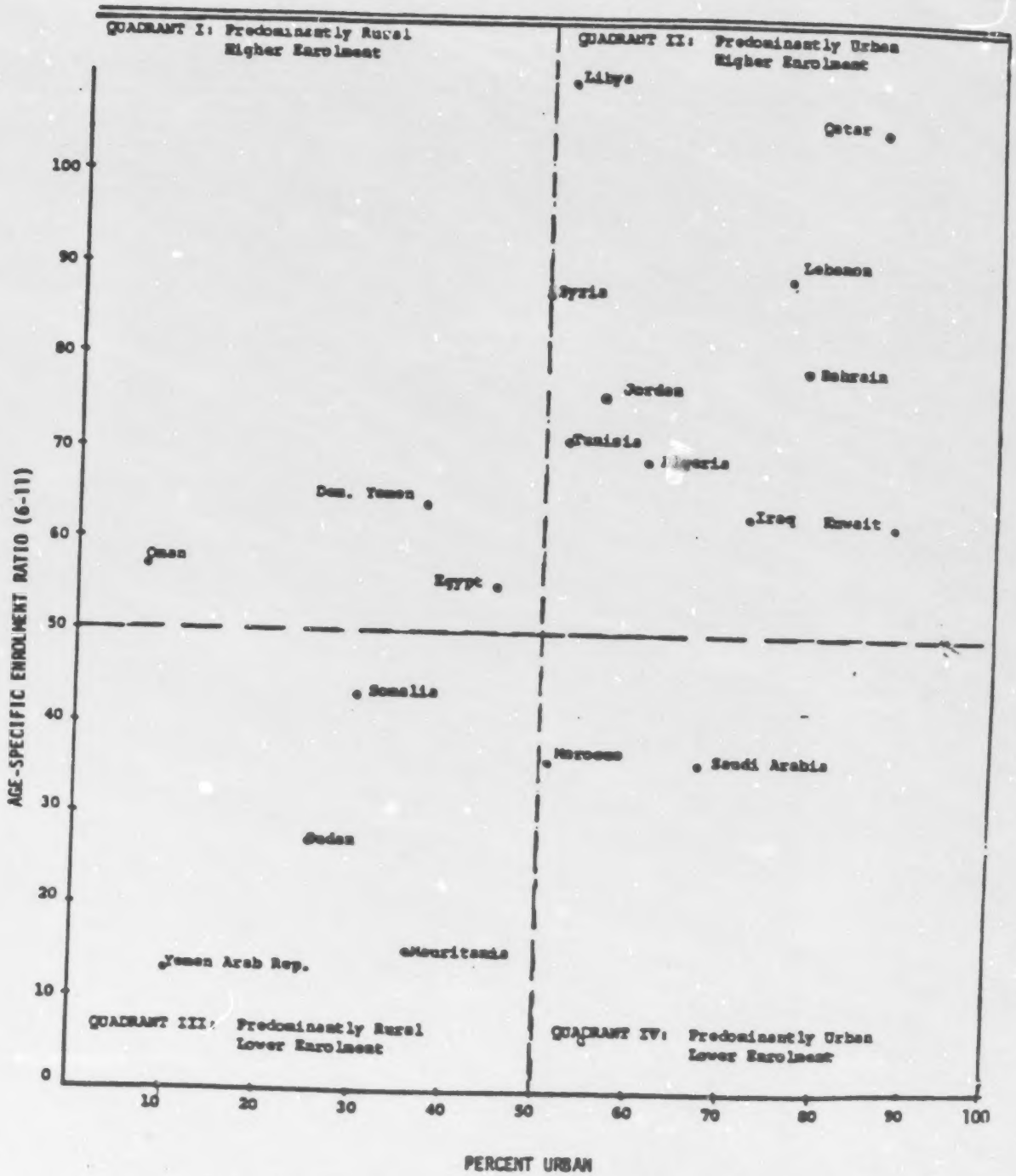
THE PERCENT OF GIRLS WHO GRADUATED FROM PRIMARY SCHOOL WITHOUT EVER REPEATING A GRADE ACCORDING TO THE FEMALE GROSS ENROLMENT RATIO IN PRIMARY SCHOOLS IN THE ARAB REGION, 1970



Source: Unesco, 1977 (ED-77/MINEDARAB/Ref. 3).

FIGURE 9

AGE-SPECIFIC ENROLMENT RATIOS OF GIRLS AGED 6-11 IN ARAB COUNTRIES ACCORDING TO THE PERCENT OF THE POPULATION THAT IS URBAN, 1980

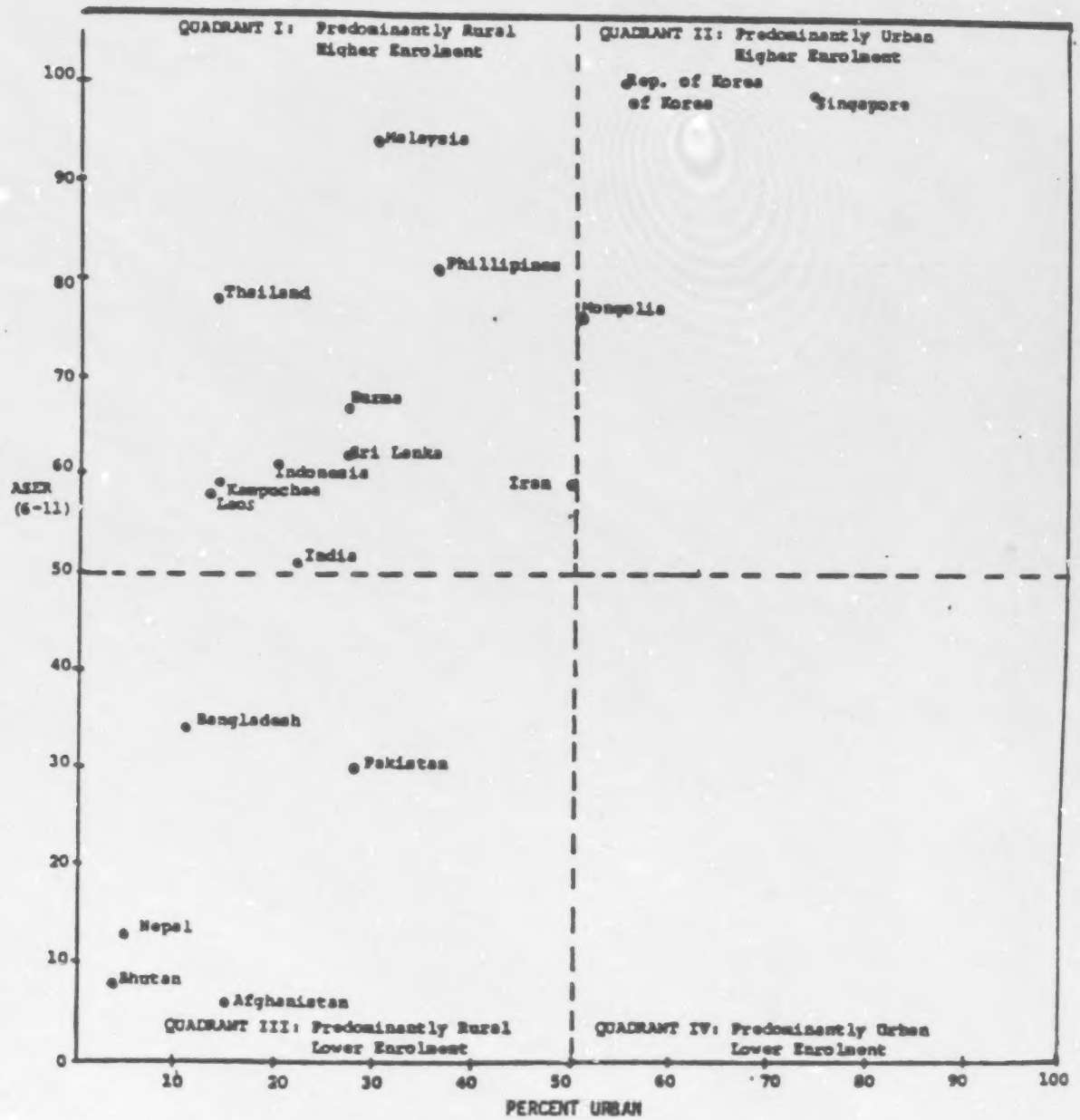


Source: United Nations, 1982. Estimates and Projections of Urban, Rural and City Populations 1950-2025: The 1980 Assessment, Table 1; and Unesco, 1977. Trends and of Enrolment by Level of Education and Age, (CSR-E-21).

BEST COPY AVAILABLE

FIGURE 10

AGE-SPECIFIC ENROLMENT RATIOS OF GIRLS AGED 6-11 IN ASIAN COUNTRIES ACCORDING TO THE PERCENT OF THE POPULATION THAT IS URBAN, 1980



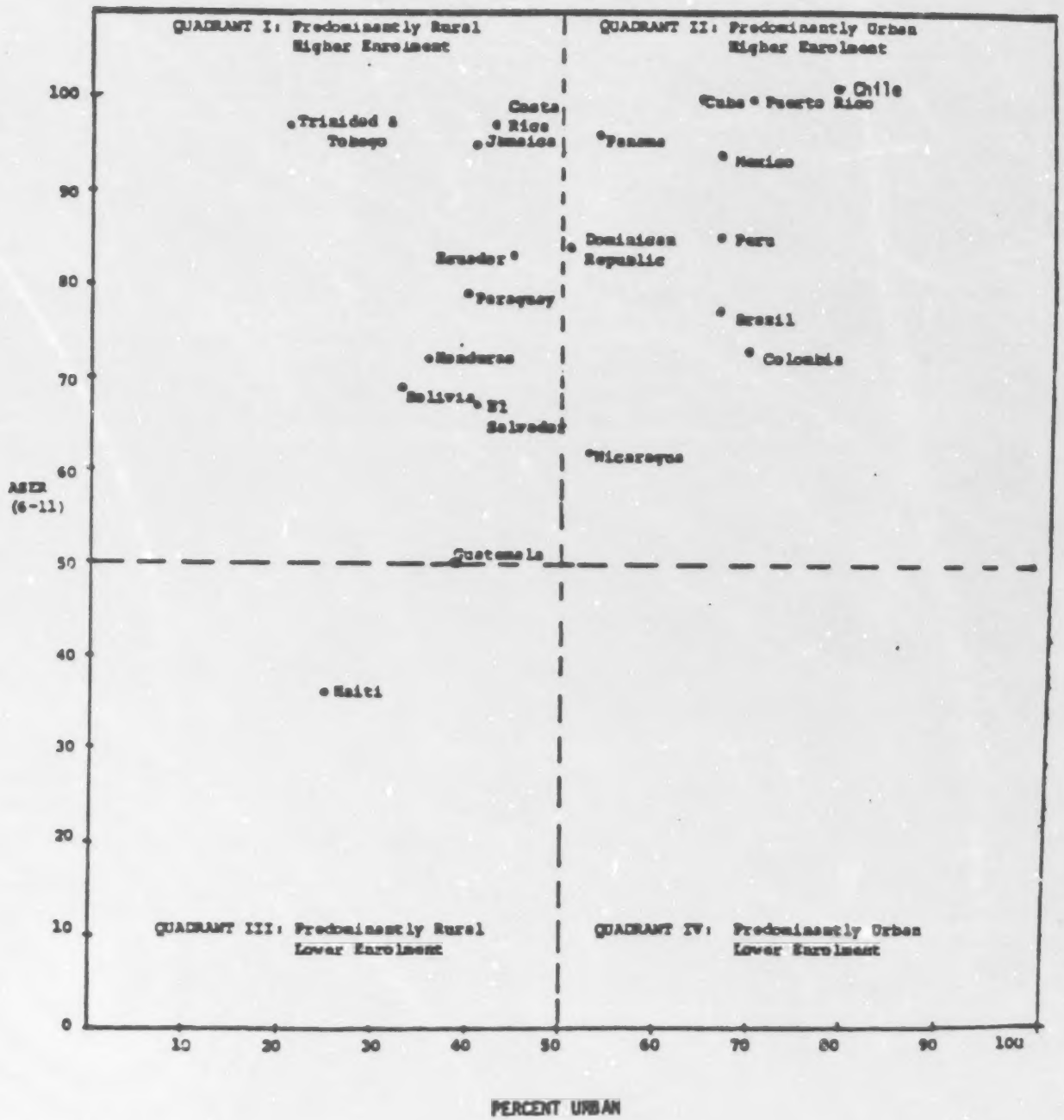
Source: United Nations, 1982. Estimates and Projections of Urban, Rural and City Populations, 1950-2025: The 1980 Assessment, Table 1; and Unesco, 1977. Trends and Projections of Enrolment of Education and Age, (CSR-F-21).

BEST COPY AVAILABLE

BEST COPY AVAILABLE

FIGURE 11

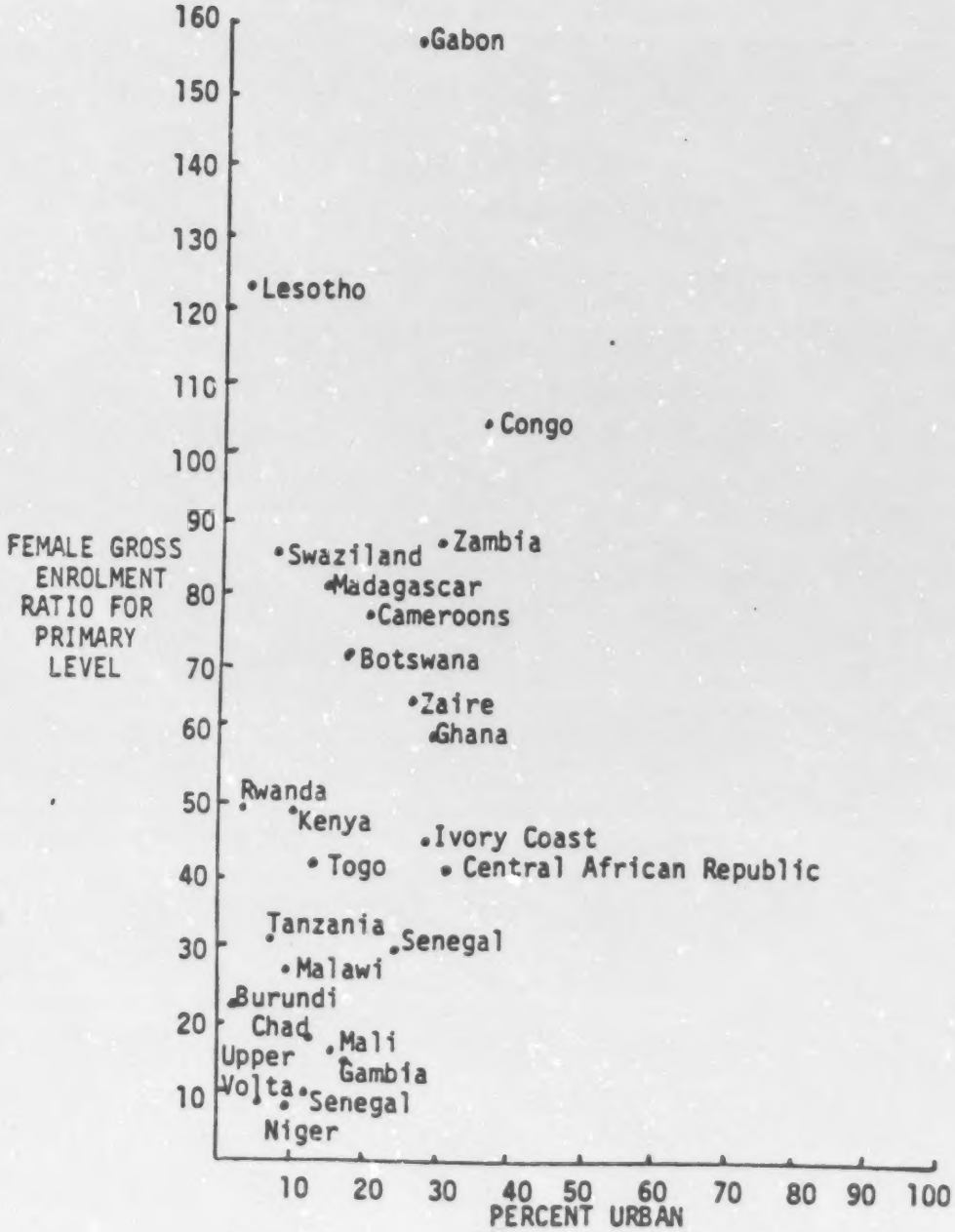
AGE-SPECIFIC ENROLMENT RATIOS OF GIRLS AGED 6-11 IN LATIN AMERICAN COUNTRIES ACCORDING TO THE PERCENT OF THE POPULATION THAT IS URBAN, 1980



Source: United Nations, 1982. Estimates and Projections of Urban, Rural and City Populations, 1950-2025: The 1980 Assessment, Table 1; and Unesco, 1977. Trends and Projections of Enrolment by Level of Education and Age (CSR-E-21).

FIGURE 12

THE GROSS ENROLMENT RATIO FOR GIRLS IN PRIMARY SCHOOL
FOR SELECTED COUNTRIES IN AFRICA
ACCORDING TO THE PERCENT OF THE POPULATION IN EACH COUNTRY THAT IS URBAN, 1970

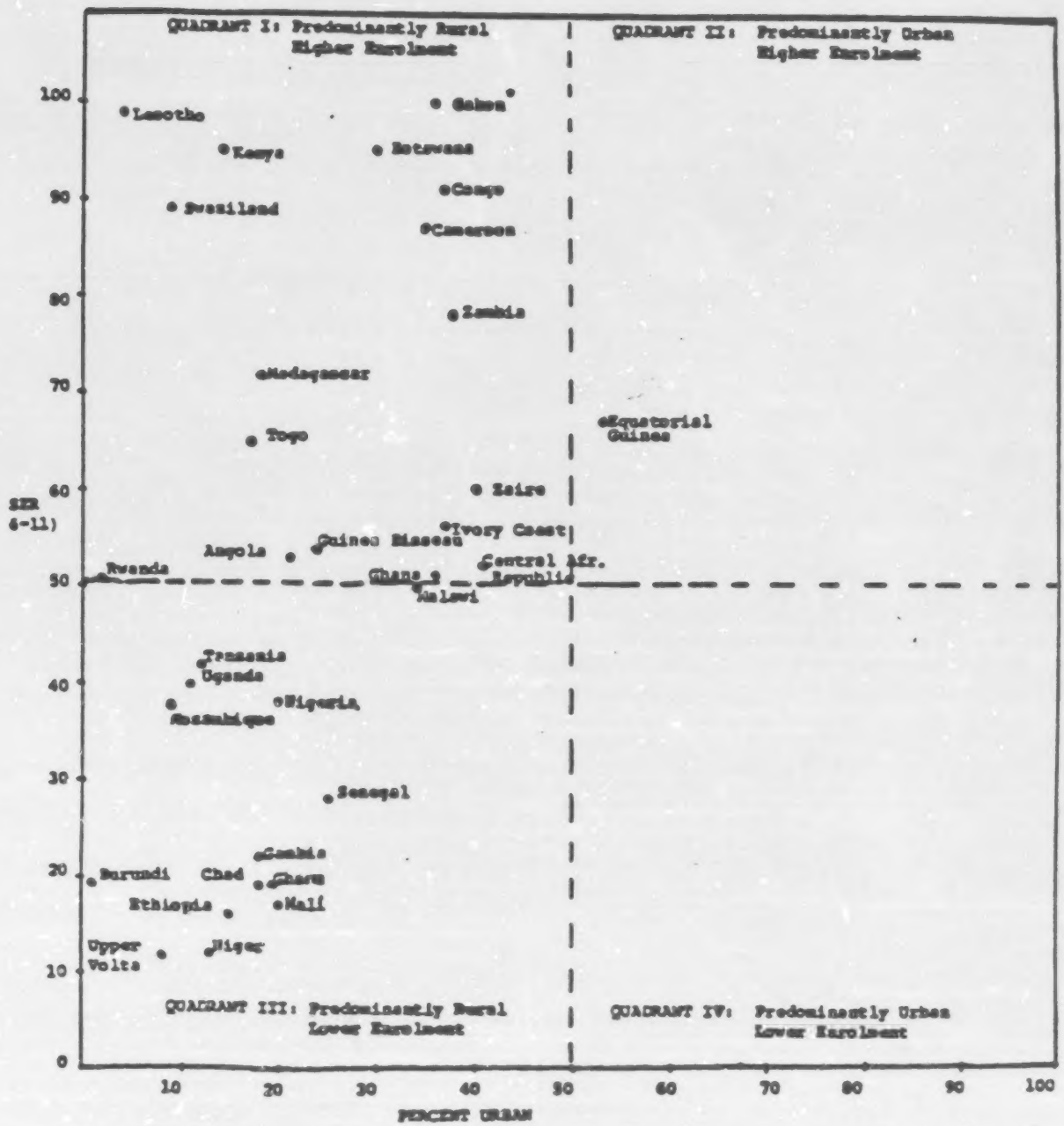


Source: United Nations, 1982. Estimates and Projections of Urban, Rural and City Populations, 1950-2025: The 1980 Assessment, Table 1; and Unesco, 1982. Development of Education in Africa: A Statistical Review, (ED-82/MINEDAF/Ref. 2).

BEST COPY AVAILABLE

FIGURE 13

AGE-SPECIFIC ENROLMENT RATIOS OF GIRLS AGED 6-11 IN AFRICA ACCORDING TO THE PERCENT OF THE POPULATION THAT IS URBAN, 1980



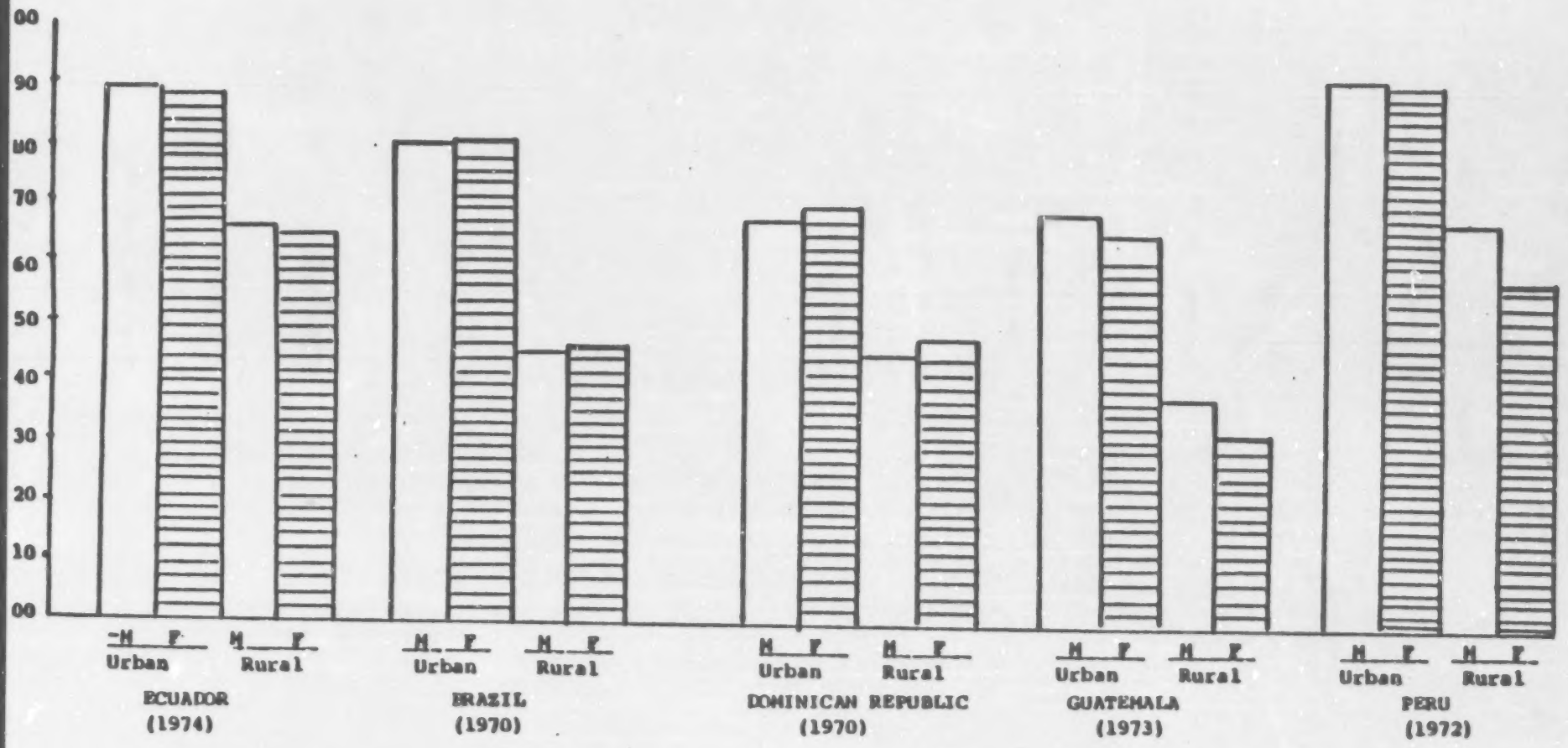
Source: United Nations, 1982. Estimates and Projections of Urban, Rural and City Populations, 1950-2025: The 1980 Assessment, Table 1; and Unesco, 1977. Trends And Projections of Enrolment by Level of Education and Age, (CSR-E-21).

*The actual ASEP for females in Gabon was 133.7 in 1980.

BEST COPY AVAILABLE

FIGURE 24

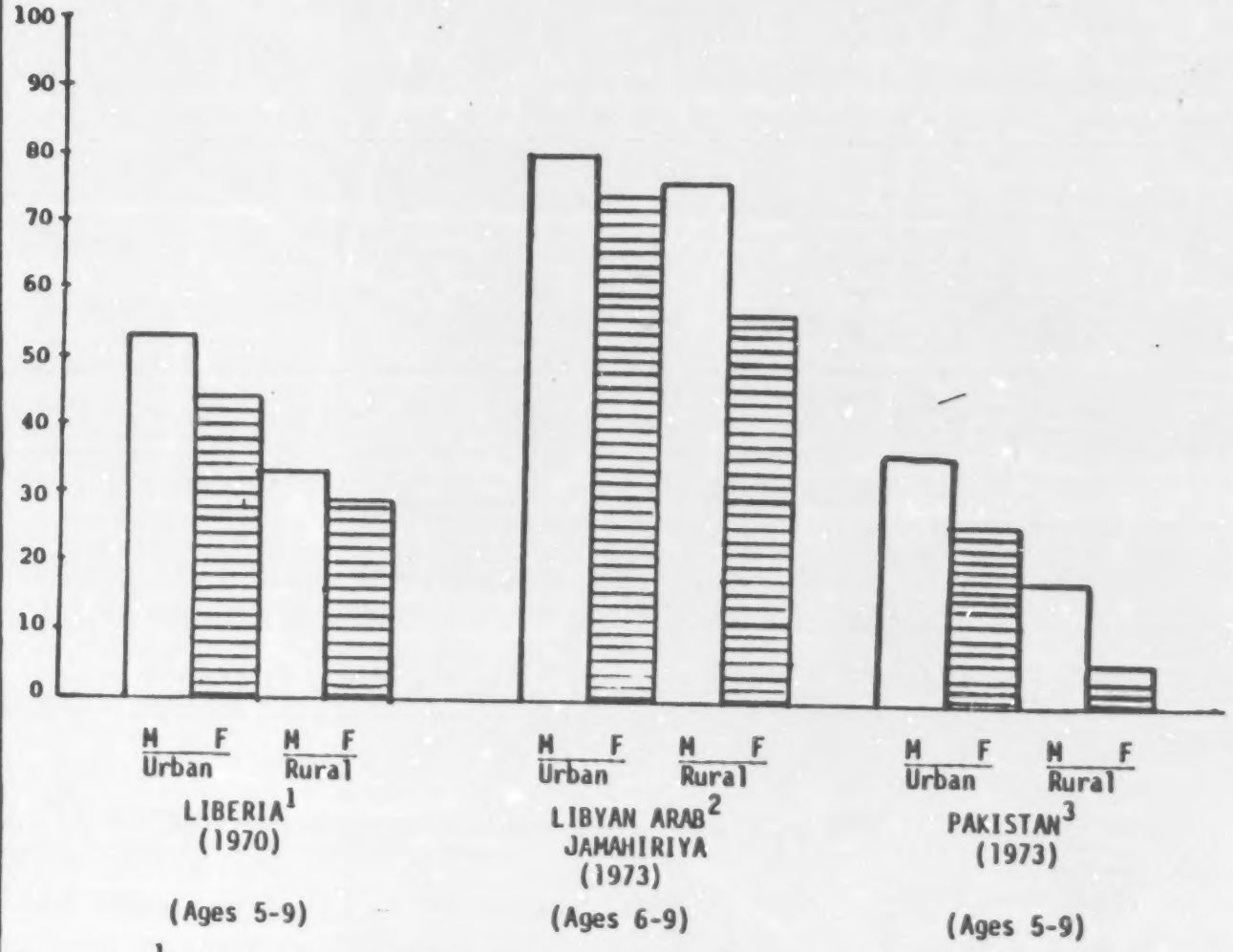
THE PERCENT OF CHILDREN AGES 7-9 WHO ARE ATTENDING SCHOOL
FOR SELECTED COUNTRIES IN LATIN AMERICA
BY SEX OF CHILD AND RURAL/URBAN STATUS



Source: United Nations, 1980. 1979 Demographic Yearbook, Special Topic Table 35, pp. 763-780.

FIGURE 15

THE PERCENT OF CHILDREN WHO ARE ATTENDING SCHOOL IN SELECTED COUNTRIES AMONG ARAB AND ASIAN STATES BY SEX AND AGE OF CHILD AND RURAL/URBAN STATUS



Sources: [1]United Nations, 1980. Demographic Yearbook, 1979. Special Topic Table 35.

[2]Socialist People's Libyan Arab Jamahiriya, Secretariat of Planning, Census and Statistics Sept. 1973. Population Census.

BIBLIOGRAPHY

Akuffo, F.O. 1975. "High Wastage in Women's Education: The Case of Rural Elementary School Girls." Legon, Ghana. Cited in Constantina Safilios-Rothschild, "Access of Rural Girls to Primary Education in the Third World: State of Art, Obstacles, and Policy Recommendations," p. 4. Report prepared for USAID, Office of Women in Development, 1979.

Anwar, Seemin and Fai Bilquees. 1976. The Attitudes, Environment and Activities of Rural Women: A Case Study of Jhok Sayal. Research Report No. 98. Islamabad: Pakistan Institute of Development Economics. (Cited in Smock, 1981: 92).

Asberg, R. 1973. Primary Education and National Development. Stockholm: Almquist and Wiksell.

Bahrain. Cabinet Affairs. 1980. Statistical Abstract, 1980. Bahrain: Directorate of Statistics.

Balderston, Judith B., Alan B. Wilson, Maria E. Freire, and Mari S. Simonen. 1981. Malnourished Children of the Rural Poor: The Web of Food, Health, Education, Fertility, and Agricultural Production. Boston: Auburn House Publishing Co.

Birdsall, Nancy. 1982. "The Impact of School Availability and Quality on Children's Schooling in Brazil." Population and Human Resources Discussion Paper, no. 82-8. Washington D.C.: The World Bank.

Bowman, Mary Jean and C. Arnold Anderson. 1978. "The Participation of Women in Education in the Third World." Report prepared for the Ford Foundation, New York. Mimeo.

Bremer, M.A. and L. Pauli. 1971. Wastage in Education: A World Problem. UNESCO Studies and Surveys in Comparative Education. Paris: UNESCO Press.

Buvinic, Mayra, Margaret Lycette and William P. McGreevey, eds. 1983. Women and Poverty in the Third World. Baltimore: Johns Hopkins University Press.

Chaibderraine, M. 1978. Educational Wastage at the Primary Level. Linkoping: Linkoping Studies in Education, Dissertations, no. 9.

Chamie M. and J.K. Harfouche. 1976. "Indigenous Midwives in Lebanon." In The Organization of Family Planning Programs, pp. 183-223. Edited by Smithsonian Institution. Washington D.C.: Smithsonian Institution.

Cherninchovsky, Dov. 1981. "Socioeconomic and Demographic Aspects of School Enrollment and Attendance in Rural Botswana." Population and Human Resources Discussion Paper, no. 81-47. Washington D.C.: The World Bank.

Clark, Carol A.M. 1979. "Relation of Economic and Demographic Factors to Household Decisions Regarding Education of Children in Guatemala." Ph.D. Dissertation, University of Michigan, Ann Arbor.

Cochrane, Susan H. 1982. "Education and Fertility: An Expanded Examination of the Evidence." In Women's Education in the Third World: Comparative Perspectives, pp. 311-30. Edited by Gail P. Kelly and Carolyn M. Elliott. Albany: State University of New York Press.

Cochrane, Susan H. and Dean T. Jamison. 1981. "The Determinants and Consequences of Educational Achievement in the Rural Chiang Mai Valley." Population and Human Resources Discussion Paper, no. 81-61. Washington D.C.: The World Bank.

Collins, S. 1965. "The Social and Economic Causes of Wastage in Schools and Other Educational Institutions in Tanganyika," Teacher Education 5: 40-50.

Deble, Isabelle. 1980. The School Education of Girls. Paris: UNESCO Press.

Dubbeldam, L.F.B. 1982. "Primary Education in the Third World: An Overview of Quantity and Quality." Paper presented at the Oslo Seminar Programme on Education in Developing Countries, University of Olso, October 18-20, 1982.

El-Ghannam. 1970. "Politics in Educational Planning." IIEP Occasional Paper, no. 19. Paris: UNESCO, International Institute for Educational Planning.

El-Hamamsy, L. 1973. "The Dayon of Egypt: Survival in a Modernizing Society." Caltech Population Program Occasional Papers, series I, no. 8. Pasadena: California Institute of Technology.

Eliou, Marie. 1973. "Scolarisation et Promotion Feminine en Afrique Francophone," International Review of Education 19: 30-44.

Foster, Philip. 1977. "Education and Social Differentiation in Less Developed Countries," Comparative Education Review 21 (June-October): 211-229.

Frederiksen, Berger. 1982. "The Arithmetics of Achieving Universal Education." Paper presented at the Oslo Seminar Programme on Education in Developing Countries, University of Oslo, October 18-20, 1982.

Giele, Janet Zollinger and Audrey Chapman Smock, eds. 1977. Women: Roles and Status in Eight Countries. New York: John Wiley and Sons.

Hermalin, Albert, Judith Seltzner, and Ching-Hsiang Lin. 1982. "Transitions in the Effect of Family Size on Female Education Attainment: The Case of Taiwan," Comparative Education Review (June 1982): 254-70.

Heyneman, Stephen P. and Dean T. Jamison. 1980. "Student Learning in Uganda: Textbook Availability and Other Factors," Comparative Education Review 24 (June 1980): 206-20.

Indian Institute of Public Opinion. 1973. A Wasted Asset: A Survey of Rural Youth in Two Indian Districts. New Delhi: UNICEF.

Jamison, Dean T. 1978. "Radio Education and Student Repetition in Nicaragua." In Radio Math Project: Nicaragua 1976-77, pp. 199-221. Edited by Patrick Suppes, Barbara Searle and Jamesine Friend. Stanford, California: Stanford University, Institute for Mathematical Studies in the Social Sciences.

Johnston, Bruce F. and William C. Clark. 1982. Redesigning Rural Development: A Strategic Perspective. Baltimore: John Hopkins University Press.

Johnston, J.A. 1976. "The Location and Distribution of Primary School in the Asian Region," Bulletin of the UNESCO Regional Office for Education in Asia, no. 17 (June 1976).

Jones, Marie Thourson. 1982. "Educating Girls in Tunisia: Issues Generated by the Drive for Universal Enrollment." In Women's Education in the Third World: Comparative Perspectives, pp. 31-50. Edited by Gail P. Kelly and Carolyn M. Elliott. Albany: State University of New York Press.

Kelly, Gail P. and Carolyn M. Elliott, eds. 1982. Women's Education in the Third World: Comparative Perspectives. Albany: State University of New York Press.

Levy, Mildred B. 1971. "Determinants of Primary School Dropouts in Developing Countries," Comparative Education Review 15 (February 1971): 44-58.

Lockheed, Marlaine E. and Dean T. Jamison. 1979. "Some Determinants of School Participation in the Terai Region of Nepal." Washington D.C.: World Bank. Mimeo.

Lynch, Patrick D. 1975. "School and Family Predictors of Achievement and Dropout in Elementary Schools of a Developing Country." Paper presented to the American Education Research Association, Washington, D.C., April 1975.

Maas, Jacob van Lutsenburg and Geert Criel. 1982. Distribution of Primary School Enrollments in East Africa. Working Paper, no. 511. Washington, D.C.: The World Bank.

McSweeney, Brenda Gael and Marion Freedman. 1982. "Lack of Time as an Obstacle to Women's Education: The Case of Upper Volta." In Women's Education in the Third World: Comparative Perspectives, pp. 89-103. Edited by Gail P. Kelly and Carolyn M. Elliot. Albany: State University of New York Press.

Menon, M. Indu. 1981. "Education of Muslim Women: Tradition versus Modernity." In Women in the Family and the Economy: An International Comparative Survey, pp. 107-13. Edited by George Kurian and Ratna Ghosh. Westport, Connecticut: Greenwood Press.

Moock, Peter R. and Joanne Leslie. n.d. "Childhood, Nutrition and Schooling in the Terai Region of Nepal." Working Paper. Washington, D.C.: The World Bank.

Mueller, Eva. 1983. "Measuring Women's Poverty in Developing Countries." In Women and Poverty in the Third World, pp. 272-85. Edited by Mayra Buvinic, Margaret Lycette and William Paul McGreevey. Baltimore: Johns Hopkins University Press.

Nag, Moni, Benjamin N.F. White and R. Creighton Peet. 1978. "An Anthropological Approach to the Study of the Economic Value of Children in Java and Nepal," Current Anthropology 19: 294-306.

Naik, Chitra. 1982. "An Action-Research Project on Universal Primary Education - The Plan and the Process." In Women's Education in the Third World: Comparative Perspectives, pp. 152-72. Edited by Gail P. Kelly and Carolyn M. Elliott. Albany: State University of New York Press.

Natto, Ibrahim A. and Sarwar M. Khan. 1976. "Growth of Elementary Education in the Kingdom of Saudi Arabia, 1960 to 1975 (with Projections up to 1985)." Mimeo.

Nkinyangi, John. 1982. "Access to Primary Education in Kenya: The Contradictions of Public Policy," Comparative Education Review (June 1982): 199-217.

_____. 1980. "Socioeconomic Determinants of Repetition and Early School Withdrawal at the Primary School Level and Their Implications for Educational Planning in Kenya." Ph.D Dissertation, Stanford University.

Rogers, E. and D. Solomon. 1975. "Traditional Midwives and Family Planning in Asia" Studies in Family Planning 6(5): 126-33.

Romain, Ralph. 1982. "Advances and Problems of Basic Education in Latin America." Paper presented at the Oslo Seminar Programme on Education in Developing Countries, University of Oslo, October 18-20, 1982.

Safilios-Rothschild, Constantina. 1979. "Access of Rural Girls to Primary Education in the Third World: State of Art, Obstacles, and Policy Recommendations." Report prepared for the U.S. Agency for International Development, Office of Women in Development. Washington D.C.: USAID.

Schiefelbein, Ernesto and Joseph P. Farrell. 1982. Eight Years of Their Lives: Through Schooling to the Labour Market in Chile. Ottawa, Canada: International Development Research Centre.

Schildkrout, Enid. 1982. "Dependence and Autonomy: The Economic Activities of Secluded Hausa Women in Kano, Nigeria." In Women and Work in Africa. Edited by Edna G. Bay. Boulder, Colorado: Westview Press.

Schmink, Marianne. 1980. "The Plight of Poor Women in the Latin American Metropolis." See also "Women in the Urban Economy in Latin America," 1982. New York: The Population Council.

Selowsky, Marcelo. 1983. "Women's Access to Schooling and the Value Added of the Educational System: Application to Higher Education." In Women and Poverty in the Third World, pp. 176-97. Edited by Mayra Buvinic, Margaret Lycette and William Paul McGreevey. Baltimore: Johns Hopkins University Press.

Shah, Nasra M., ed. 1982. Pakistani Women: A Socioeconomic and Demographic Profile. U.S. Agency for International Development and the East-West Population Institute.

Simmons, John and Leigh Alexander. 1978. "The Determinants of School Achievement in Developing Countries: A Review of the Research," Economic Development and Cultural Change 26 (January 1978).

Simmons, R., G. Simmons et. al. 1975. "Organizing for Government Intervention in Family Planning," World Politics 4 (July 27, 1975): 569-96.

Smock, Audrey Chapman. 1981. Women's Education in Developing Countries: Opportunities and Outcomes. New York: Praeger.

Smyth, J.A. 1982. "Costs and Financing Obstacles to Universal Primary Education in Africa." Educational Financing Occasional Papers, no. 6. Paris: Unesco Press.

Thailand. National Statistical Office. 1976. The Children and Youth Survey, Thailand 1976. Thailand: National Statistical Office.

Thonstad, Tore. 1980. Analyzing and Projecting School Enrolment in Developing Countries: A Manual of Methodology. UNESCO Statistical Reports and Studies, no. 24. Paris: UNESCO Press.

UNESCO. 1983. Comparing Population Census Data and Institutional Data on Participation in Education: Uses and Limitations of the Two Sources. (ST-83/W5/15).

_____. 1982. "Development of Education in Africa: A Statistical Review." UNESCO Conference of Ministers of Education and Those Responsible for Economic Planning in African Member States, Harare, June 28-July 3, 1982. (ED-82/MINEDAF/Ref.2).

_____. 1981. UNESCO Statistical Yearbook. Paris: UNESCO Press.

_____. 1980a. Comparative Analysis of Male and Female Enrolment and Illiteracy. Report prepared by the Division of Statistics on Education, Office of Statstics, with the assistance of S. Slama and C. Sauvageot.

_____. 1980b. Wastage in Primary and General Secondary Education: A Statistical Study of Trends and Patterns in Repetition and Drop-Out. Division of Statistics on Education, Office of Statistics. (CSR-E-37).

_____. 1978a. "Final Report of the Asian Regional Seminar on Access of Girls to Primary Education." Kathmandu, Nepal. October 2-6, 1978.

_____. 1978b. Development of Education in Asia and Oceania: Statistical Trends and Projections, 1965-1980. Fourth Regional Conference of Ministers of Education and Those Responsible for Economic Planning in Asia and Oceania, Colombo, July 24-August 1, 1978. (ED/78-MINEDASO/Ref.2)

_____. 1977a. "Recent Quantitative Trends and Projections Concerning Enrolment in Education in the Arab Countries." The Conference of Ministers of Education and Those Reponsible for Economic Planning in the Arab States, United Arab Emirates, November 7-16, 1977. (ED-77/MINEDARAB/Ref.3)

------.1977b. Trends and Projections of Enrollment by Level of Education and Age. (CSR-E-21).

_____. 1975a. Women, Education, Equality: A Decade of Experiment. Paris: UNESCO Press.

_____. 1975b. Wastage in Primary Education in Africa: Statistical Study. (CSR-E-21).

_____. 1975c. The Dimensions of School Enrolment: A Study of Enrollment Ratios in the World. (CSR-E-16).

United Nations. 1984a. Compiling Social Indicators on the Situation of Women. New York: United Nations. (Sales No. E 84 XVII. 2.)

United Nations, 1984b. Improving Concepts and Methods for Statistics and Indicators on Women. New York: United Nations. (Sales No. E 84 XVII.3)

United Nations. 1982. Estimates and Projections of Urban, Rural and City Populations, 1950-2025: The 1980 Assessment. New York: United Nations.

United Nations. 1980. 1979 Demographic Yearbook. New York: United Nations.

UNICEF. 1978. "Equal Access of Women to Education Programs in Nepal." Study sponsored by UNICEF with the National Education Committee, Center for Education Research, Innovation and Development. Nepal: UNICEF.

University of Colombo. 1979. The Status of Women: Sri Lanka.

U.S. Agency for International Development. 1978. "Conclusions about Repetition, Dropout and National Achievement Examination Results in Basic Education." Analytical Working Document, no. 2. San Salvador, El Salvador: USAID, Sector Analysis Division, Office of Development Resources, Bureau for Latin America.

Walker, Sheila D. and Ellen Brazier. 1977. "Women, Education and Rural Development in Cameroon--The Fulbe of the Garoua Region," The African-American Scholar 1 (June 1977): 4-8.

Weis, Lois. 1981. "Schooling and Patterns of Access," Canadian Journal of African Studies 15 (2): 311-22.

Werdelin, Ingvar. 1982. "The Elementary School: Responsible for Causing Illiteracy?" Paper presented at the Oslo Programme on Education in Developing Countries, University of Oslo, October 18-20, 1982.

Wolff, Laurence. 1970. "Why Children Fail in the First Grade in Rio Grande do Sul: Inplications for Policy and Research." Report prepared for the U.S. Agency for International Development, Human Resources Office, Rio de Janeiro, Brazil.

World Bank. 1982. World Development Report, 1982. New York: Oxford Univerity Press.

Youssef, Nadia. 1978. "Women and Their Professional Future: An Assessment of Training Needs and Training Programs in Morocco." Report prepared for U.S. Agency for International Development, Near East Regional Bureau. Washington, D.C.: International Center for Research on Women.

Youssef, Nadia, Jennefer Sebstad and Isabel Nieves. 1979. "Variations in Nuptiality Age: An Inquiry into its Trends and Determinants." Report prepared for the World Bank, Development Economics Department. Washington, D.C.: International Center for Research on Women.

Zsigmond, Zoltan and Mary Sue Devereaux. 1980. World School-Age Population: Trends and Implications, 1960-2000. Ottawa, Canada: Statistics Canada.

 "END OF DOCUMENT"